

=> fil reg
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STRUCTURE FILE UPDATES: 2 MAY 2007 HIGHEST RN 934214-84-3
 DICTIONARY FILE UPDATES: 2 MAY 2007 HIGHEST RN 934214-84-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

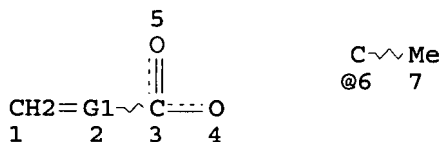
TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

Please note that search-term pricing does apply when
 conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
 predicted properties as well as tags indicating availability of
 experimental property data in the original document. For information
 on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> d que stat 18
 L3 STR



VAR G1=CH/6
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 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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 NUMBER OF NODES IS 7

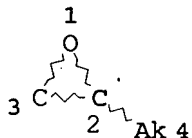
STEREO ATTRIBUTES: NONE
 L4 STR

Ak~O
 1 2

NODE ATTRIBUTES:
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 GGCAT IS SAT AT 1
 DEFAULT ECLEVEL IS LIMITED
 ECOUNT IS M2-X10 C AT 1

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 2

STEREO ATTRIBUTES: NONE
L5 STR



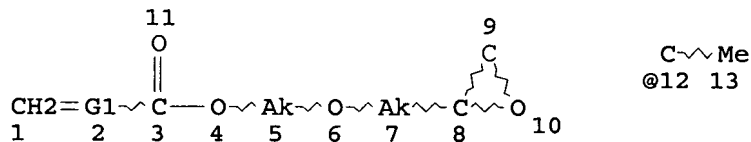
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GGCAT IS SAT AT 4
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M1-X3 C AT 4

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 4

STEREO ATTRIBUTES: NONE
L6 SCR 2043
L8 30676 SEA FILE=REGISTRY SSS FUL L3 AND L4 AND L5 AND L6

100.0% PROCESSED 83939 ITERATIONS 30676 ANSWERS
SEARCH TIME: 00.00.02

=> d que stat 19
L9 STR



VAR G1=CH/12
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS SAT AT 5
GGCAT IS SAT AT 7
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M2-X10 C AT 5
ECOUNT IS M1-X3 C AT 7

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

=> d his nofile

(FILE 'HOME' ENTERED AT 16:05:08 ON 03 MAY 2007)

FILE 'HCAPLUS' ENTERED AT 16:05:17 ON 03 MAY 2007

L1 1 SEA ABB=ON PLU=ON US2006041052/PN

FILE 'REGISTRY' ENTERED AT 16:05:41 ON 03 MAY 2007
L2 2 SEA ABB=ON PLU=ON (106797-53-9/BI OR 691401-65-7/BI)
D SCA

FILE 'LREGISTRY' ENTERED AT 16:11:06 ON 03 MAY 2007
L3 STR
L4 STR
L5 STR

FILE 'REGISTRY' ENTERED AT 16:15:12 ON 03 MAY 2007
L6 SCR 2043
L7 50 SEA SSS SAM L3 AND L4 AND L5 AND L6
L8 30676 SEA SSS FUL L3 AND L4 AND L5 AND L6
SAV TEMP L8 SAS045/A

FILE 'LREGISTRY' ENTERED AT 16:17:41 ON 03 MAY 2007
L9 STR

FILE 'REGISTRY' ENTERED AT 16:21:35 ON 03 MAY 2007
L10 2 SEA SUB=L8 SSS SAM L9 AND L3
L11 129 SEA SUB=L8 SSS FUL L9 AND L3
L12 1 SEA ABB=ON PLU=ON L2 AND L11
SAV L11 SAS045S1/A

FILE 'HCAPLUS' ENTERED AT 16:23:33 ON 03 MAY 2007
L13 70 SEA ABB=ON PLU=ON L11
L14 QUE ABB=ON PLU=ON (PHOTO OR LIGHT) (A) SENS? OR PHOTOSENS
? OR LIGHTSENS?
L15 15 SEA ABB=ON PLU=ON L13 AND L14
L16 QUE ABB=ON PLU=ON PHOTO? (2A) INITIAT? OR PHOTOINIT?
L17 8 SEA ABB=ON PLU=ON (L13 OR L15) AND L16
L18 10 SEA ABB=ON PLU=ON L15 NOT L17
L19 19123 SEA ABB=ON PLU=ON L8
L20 9714 SEA ABB=ON PLU=ON L8 (L) PREP+ALL/RL
L21 984 SEA ABB=ON PLU=ON L20 AND L16
L22 QUE ABB=ON PLU=ON L16 (2A) COMPOSITION
L23 119 SEA ABB=ON PLU=ON L21 AND L22
L24 QUE ABB=ON PLU=ON WATER OR H2O OR AQUEOUS?
L25 18 SEA ABB=ON PLU=ON L23 AND L24
L26 18 SEA ABB=ON PLU=ON L25 NOT (L17 OR L18)

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 16:43:27 ON 03 MAY 2007
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FILE COVERS 1907 - 3 May 2007 VOL ISS
FILE LAST UPDATED: 2 May 2007 (20070502/ED)
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for records published or updated in Chemical Abstracts after December
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FILE COVERS 1907 - 3 May 2007 VOL 146 ISS 19
 FILE LAST UPDATED: 1 May 2007 (20070501/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate

=> d 117 ibib abs fhitr hitind 1-8

L17 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2006:1029687 HCAPLUS
 DOCUMENT NUMBER: 145:399250
 TITLE: Method for formation of multilayer coating films
 with scratch and weather resistance and the
 active energy-curable coatings therefor
 INVENTOR(S): Matsui, Shigeru; Suga, Kazuyuki; Maejima, Kiyoe
 PATENT ASSIGNEE(S): Nippon Bee Chemical Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 22pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006263616	A	20061005	JP 2005-86924	200503 24
PRIORITY APPLN. INFO.: JP 2005-86924				200503 24

AB Title method comprises spreading plastic substrates with active energy-curable primers containing (a) (meth)acrylic resins containing double bond linkages on side chains, (b) polyfunctional (meth)acrylates, (c) (meth)acryloyl group-containing UV absorbers, and (d) photopolymer. initiators, curing, and forming clear coating films. A polycarbonate plate was sprayed with a primer composition containing 2-ethylhexyl acrylate-4-hydroxybutyl acrylate glycidyl ether-isobornyl methacrylate-methacrylic acid-Me methacrylate copolymer, Ebecryl 1290, RUVA 93, photopolymer. initiators, and light stabilizer, UV-cured, further sprayed with a clear composition containing IPDI-hexahydrophthalic acid-pentaerythritol-neopentyl glycol monohydroxypivalate-pentaerythritol triacrylate copolymer, Aronix M 408, initiators, an UV absorber, and FCS 016 (methacrylate-modified colloidal SiO₂), and UV-cured to form a bilayered coating film showing good interlayer adhesion, heat, scratch, and weather resistance.

IT 911214-36-3P, 2-Ethylhexyl acrylate-4-hydroxybutyl acrylate glycidyl ether-isobornyl methacrylate-methacrylic acid-methyl methacrylate-Ebecryl 1290-RUVA 93 copolymer
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (acrylic UV absorber-containing, cured; manufacture of scratch and weather-resistant multilayer coatings from UV-curable UV absorber-containing acrylic resin primers)

RN 911214-36-3 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, polymer with 2-[3-(2H-benzotriazol-2-

yl)-4-hydroxyphenyl]ethyl 2-methyl-2-propenoate, Ebecryl 1290,
2-ethylhexyl 2-propenoate, methyl 2-methyl-2-propenoate,
4-(oxiranylmethoxy)butyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-
trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA
INDEX NAME)

CM 1

CRN 138636-06-3

CMF Unspecified

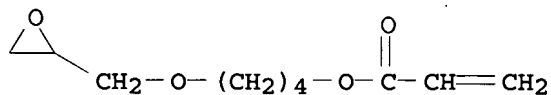
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

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CRN 119692-59-0

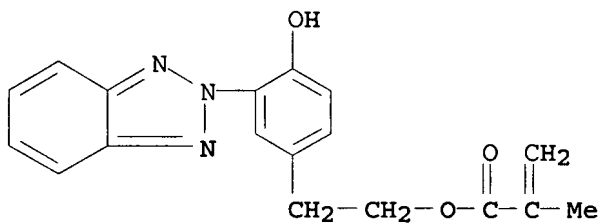
CMF C10 H16 O4



CM 3

CRN 96478-09-0

CMF C18 H17 N3 O3

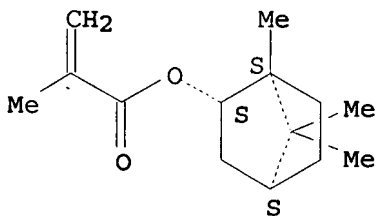


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CRN 7534-94-3

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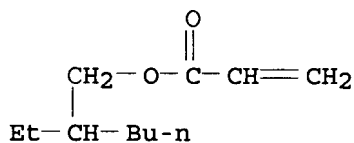
Relative stereochemistry.



CM 5

CRN 103-11-7

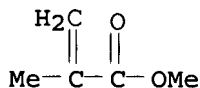
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CM 6

CRN 80-62-6

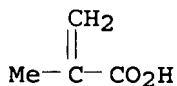
CMF C5 H8 O2



CM 7

CRN 79-41-4

CMF C4 H6 O2



CC 42-10 (Coatings, Inks, and Related Products)

IT 911214-36-3P, 2-Ethylhexyl acrylate-4-hydroxybutyl acrylate
glycidyl ether-isobornyl methacrylate-methacrylic acid-methyl
methacrylate-Ebecryl 1290-RUVA 93 copolymer 911214-38-5P
911214-40-9P, 2-Ethylhexyl acrylate-2-hydroxyethyl
acrylate-isobornyl methacrylate-2-isocyanatoethyl acrylate-methyl
methacrylate-Ebecryl 1290-RUVA 93 copolymer

RL: IMF (Industrial manufacture); TEM (Technical or engineered
material use); PREP (Preparation); USES (Uses)
(acrylic UV absorber-containing, cured; manufacture of scratch and
weather-resistant multilayer coatings from UV-curable UV
absorber-containing acrylic resin primers)

L17 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:466165 HCAPLUS

DOCUMENT NUMBER: 144:489824

TITLE: Scratch-resistant epoxy (meth)acrylates, their
radiation-curable compositions, cured materials,
coating layers, and coated articles

INVENTOR(S): Fushimi, Keiichi

PATENT ASSIGNEE(S): Natoco Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.

DOCUMENT TYPE: CODEN: JKXXAF
 LANGUAGE: Patent
 FAMILY ACC. NUM. COUNT: Japanese
 1
 PATENT INFORMATION:

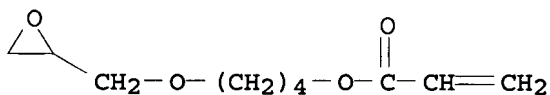
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006124653	A	20060518	JP 2005-259526	20050907
PRIORITY APPLN. INFO.:			JP 2004-282495	A 20040928

AB The epoxy (meth)acrylates, useful for coatings, optical films, etc., are prepared by reacting (A) trimellitic acid or $H(CH_2)aCHCO_2H(CH_2)bCR_1CO_2H(CH_2)cCHCO_2H(CH_2)dH$ [$R_1 = H, OH$; $a, b, d = 0-8$; $c = 0-9$; $0 \leq (a + b + c + d) \leq 9$ and $a < d$ or ($a = d$ and $b \leq c$)] with (B) $CH_2CR_2CO_2(CH_2)nO(CH_2)mG$ ($R_2 = H, Me$; $G =$ glycidyl; $n = 1-5$; $m = 0-2$) or $H_2CR_3CO_2(CH_2)sCy$ [$R_3 = H, Me$; $Cy = 4-(1,2-epoxycyclohexyl)$; $s = 1-10$]. Thus, a composition comprising epoxy acrylate prepared from 100 parts 1,2,4-butanetricarboxylic acid and 315.8 parts 4-hydroxybutyl acrylate glycidyl ether (4-HBAGE) 831.6, radiation-curable silicone (BYK 3500) 3, and **photopolymn. initiator** (Irgacure 184) 17 parts was coated on a 100 μm -thick PET film, dried, and irradiated with UV to give a 10-15 μm -thick layer showing light transmittance 91.9%, haze 0.5% both before and after repeated rubbing with steel wool with 500 g-load, fast recovery from scratches, and good resistance to toluene, H_2SO_4 , and NaOH.

IT **886356-76-9P**
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (scratch-resistant epoxy (meth)acrylates for radiation-curable compns.)
 RN 886356-76-9 HCAPLUS
 CN 1,2,4-Butanetricarboxylic acid, polymer with 4-(oxiranylmethoxy)butyl 2-propenoate (9CI) (CA INDEX NAME)

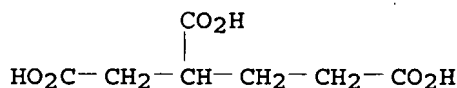
CM 1

CRN 119692-59-0
 CMF C10 H16 O4



CM 2

CRN 923-42-2
 CMF C7 H10 O6



CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 42

IT 886356-76-9P 886356-77-0P 886356-78-1P

886356-79-2P 886356-80-5P 886356-81-6P

886356-82-7P 887331-27-3P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
(Technical or engineered material use); PREP (Preparation); USES
(Uses)

(scratch-resistant epoxy (meth)acrylates for radiation-curable
compsns.)

L17 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:697110 HCAPLUS

DOCUMENT NUMBER: 143:163099

TITLE: **Photosensitive resin composition with
excellent photosensitivity and cured
product thereof**

INVENTOR(S): Koyanagi, Hiroo; Tanaka, Ryutaro; Kametani,
Hideaki

PATENT ASSIGNEE(S): Nippon Kayaku Kabushiki Kaisha, Japan

SOURCE: PCT Int. Appl., 29 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005071489	A1	20050804	WO 2005-JP761	20050121
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2552905	A1	20050804	CA 2005-2552905	20050121
EP 1710626	A1	20061011	EP 2005-703982	20050121
R: CH, DE, ES, GB, IT, LI CN 1910519 A 20070207 CN 2005-80003090				
				20050121

PRIORITY APPLN. INFO.:

JP 2004-16751

A

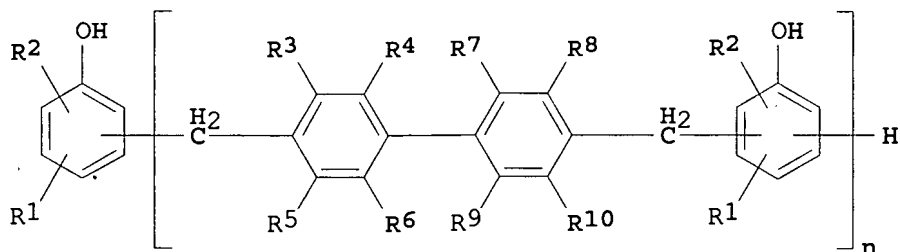
200401
26

WO 2005-JP761

W

200501
21

GI



I

AB Disclosed is a **photosensitive** resin composition with excellent **photosensitivity** whose cured product is excellent in adhesiveness, pencil hardness, solvent resistance, acid resistance, heat resistance, gold plating resistance, HAST (highly accelerated temperature and humidity stress test) properties, flame retardance, flexibility and the like. Also disclosed is such a cured product. A **photosensitive** resin composition is characterized by comprising a reaction product (A) of a compound (a) represented by the formula I ($n = 1-20$; $R_1, R_2 = H, \text{halo}, C1-4\text{-alkyl}$; $R_3, R_5, R_8, R_{10} = H, \text{halo}, \text{methyl}$; $R_4, R_6, R_7, R_9 = H, \text{methyl}$), a compound (b) having an ethylenically unsatd. group and a glycidyl group in a mol. and a polybasic acid anhydride (c), a crosslinking agent (B) and a **photopolymer. initiator** (C). Also disclosed is a cured product of such a **photosensitive** resin composition

IT 860022-07-7P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(**photosensitive** resin composition with excellent **photosensitivity** suitable for printed circuit board fabrication)

RN 860022-07-7 HCAPLUS

CN 2-Propenoic acid, 4-(oxiranylmethoxy)butyl ester, polymer with MEH 7851SS (9CI) (CA INDEX NAME)

CM 1

CRN 363137-30-8

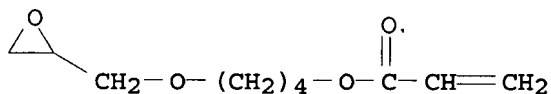
CMF Unspecified

CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

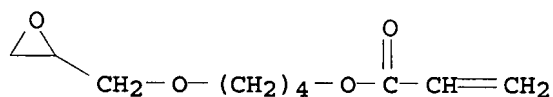
CRN 119692-59-0
CMF C10 H16 O4



IC ICM G03F007-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76
ST **photosensitive** resin compn solder resist printed circuit board fabrication
IT Solder resists
(photoresists; **photosensitive** resin composition with excellent **photosensitivity** and cured product thereof)
IT Printed circuit boards
(**photosensitive** resin composition with excellent **photosensitivity** and cured product thereof)
IT Photoresists
(solder; **photosensitive** resin composition with excellent **photosensitivity** and cured product thereof)
IT 93294-97-4, DPCA 60
RL: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking agent in **photosensitive** resin composition with excellent **photosensitivity** suitable for printed circuit board fabrication)
IT 71868-10-5, Irgacure 907 82799-44-8, DETX S
RL: CAT (Catalyst use); USES (Uses)
(**photopolymn. initiator** in **photosensitive** resin composition with excellent **photosensitivity** suitable for printed circuit board fabrication)
IT 860022-07-7P 860022-08-8P 860022-09-9P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**photosensitive** resin composition with excellent **photosensitivity** suitable for printed circuit board fabrication)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:430849 HCAPLUS
DOCUMENT NUMBER: 140:424397
TITLE: **Photosensitive** resin compositions useful for hydrogel formation
INVENTOR(S): Utsunomiya, Shin; Yamada, Seigo; Takano, Masahiro; Miyazaki, Mitsuharu
PATENT ASSIGNEE(S): Toyo Gosei Co., Ltd., Japan
SOURCE: PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

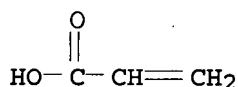
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004044024	A1	20040527	WO 2003-JP14466	20031113
W: CN, KR, US RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
JP 2004161942	A	20040610	JP 2002-331269	20021114
EP 1564232	A1	20050817	EP 2003-772744	20031113
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
CN 1711295	A	20051221	CN 2003-80103275	20031113
US 2006041052	A1	20060223	US 2005-535045	20050513
PRIORITY APPLN. INFO.:			JP 2002-331269	A
				20021114
			WO 2003-JP14466	W
				20031113
AB	A photosensitive resin composition comprises (A) a water-soluble photosensitive poly(meth)acrylic acid resin which is produced by addition reaction of part of the carboxyl groups of a (meth)acrylic acid polymer with glycidoxyalkyl (meth)acrylate and has an acid number of solids of 150 mg KOH/g or above, (B) a photopolymn. initiator , and (C) water. Hydrogel made from the compns. is useful for medical use, etc. Thus, heating Aqualic AS 58 (acrylic polymer) with 4-hydroxybutyl acrylate glycidyl ether in methanol in the presence of pyridine gave a photosensitive polymer which could be cured by UV light in the presence of a photoinitiator to give a hydrogel.			
IT	691401-65-7P, Acrylic acid-4-hydroxybutyl acrylate glycidyl ether copolymer RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (manufacture of photosensitive resin compns. useful for hydrogel formation)			
RN	691401-65-7 HCAPLUS			
CN	2-Propenoic acid, polymer with 4-(oxiranylmethoxy)butyl 2-propenoate (9CI) (CA INDEX NAME)			
CM	1			
CRN	119692-59-0			
CMF	C10 H16 O4			



CM 2

CRN 79-10-7

CMF C3 H4 O2



IC ICM C08F299-04

CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 63

IT Hydrogels

(manufacture of **photosensitive** resin compns. useful for hydrogel formation)

IT Crosslinking

(photochem.; manufacture of **photosensitive** resin compns. useful for hydrogel formation)

IT 106797-53-9, Irgacure 2959

RL: CAT (Catalyst use); USES (Uses)

(manufacture of **photosensitive** resin compns. useful for hydrogel formation)

IT 691401-65-7P, Acrylic acid-4-hydroxybutyl acrylate glycidyl ether copolymer

RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(manufacture of **photosensitive** resin compns. useful for hydrogel formation)

REFERENCE COUNT:

3

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:686602 HCAPLUS

DOCUMENT NUMBER: 133:274243

TITLE: **Photosensitive** resin compositions developable with aqueous alkalis for solder resists and printed wiring boards thereof

INVENTOR(S): Ono, Takao; Kiyota, Tatsuya; Miura, Ichiro; Kakiuchi, Naoya

PATENT ASSIGNEE(S): Tamura Kaken Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2000267275

A

20000929

JP 1999-67953

199903

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JP 3750101

B2

20060301

JP 1999-67953

199903

15

PRIORITY APPLN. INFO.:

AB The compns. contain (A) **photosensitive** prepolymers prepared by reacting acrylic acid and/or methacrylic acid with at least a part of epoxy groups of polyfunctional epoxy resins, further treating with polybasic acids and/or their anhydrides, and subsequently treating the resulting carboxyl with glycidyl compds. bearing ≥ 1 unsatd. groups [glycidyl (meth)acrylate excluded], (B) **photopolymn. initiators**, (C) reactive diluents, and (D) thermosetting compds. The compns. offer long predrying time. The printed wiring boards are coated with solder resist films of the compns.

IT 297175-46-3P, ESCN 220 acrylate-hexahydrophthalic anhydride-pentaerythritol triacrylate monoglycidyl ether copolymer
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (aqueous alkali-developable **photosensitive** acrylic epoxy resin compns. for solder resists and printed wiring boards thereof)

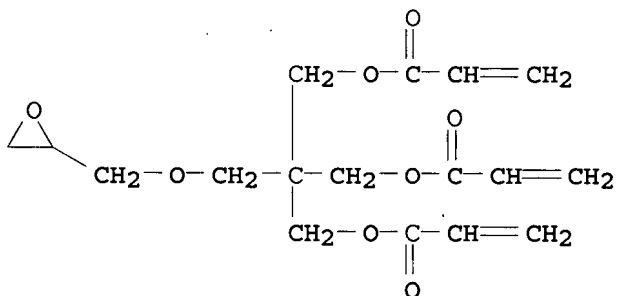
RN 297175-46-3 HCAPLUS

CN 2-Propenoic acid, 2-[(oxiranylmethoxy)methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with ESCN 220 2-propenoate and hexahydro-1,3-isobenzofurandione (9CI) (CA INDEX NAME)

CM 1

CRN 297175-45-2

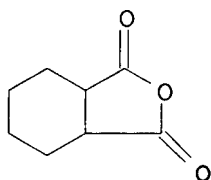
CMF C17 H22 O8



CM 2

CRN 85-42-7

CMF C8 H10 O3



CM 3

CRN 297175-44-1

CMF C3 H4 O2 . x Unspecified

CM 4

CRN 76416-87-0

CMF Unspecified

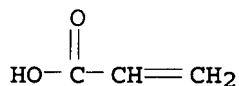
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 5

CRN 79-10-7

CMF C3 H4 O2



IC ICM G03F007-027

ICS G03F007-027; C08F290-06; C08G059-14; C08G059-17; C08K005-04;
 C08K005-10; C08K005-3477; C08K005-45; C08K005-521; C08L063-10;
 C08L101-16; G03F007-004; G03F007-028; G03F007-038; G03F007-32;
 H05K003-28

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)

Section cross-reference(s): 38

ST **photosensitive** resin compn aq alkali developing; acrylic
 epoxy photosolder resist printed circuit

IT Epoxy resins, preparation

RL: PNU (Preparation, unclassified); TEM (Technical or engineered
 material use); PREP (Preparation); USES (Uses)
 (acrylic; aqueous alkali-developable **photosensitive** acrylic
 epoxy resin compns. for solder resists and printed wiring boards
 thereof)

IT Photoresists

Printed circuit boards

(aqueous alkali-developable **photosensitive** acrylic epoxy
 resin compns. for solder resists and printed wiring boards
 thereof)

IT Phenolic resins, preparation

RL: PNU (Preparation, unclassified); TEM (Technical or engineered
 material use); PREP (Preparation); USES (Uses)

(epoxy, novolak, cresolic, acrylic; aqueous alkali-developable
photosensitive acrylic epoxy resin compns. for solder

- resists and printed wiring boards thereof)
- IT Epoxy resins, preparation
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (phenolic, novolak, cresolic, acrylic; aqueous alkali-developable **photosensitive** acrylic epoxy resin compns. for solder resists and printed wiring boards thereof)
- IT 71868-10-5, 2-Methyl-1-[4-(methylthio)phenyl]-2-morpholino-1-propanone 100752-97-4, Diethylthioxanthone
 RL: CAT (Catalyst use); USES (Uses)
 (aqueous alkali-developable **photosensitive** acrylic epoxy resin compns. for solder resists and printed wiring boards thereof)
- IT 297175-46-3P, ESCN 220 acrylate-hexahydrophthalic anhydride-pentaerythritol triacrylate monoglycidyl ether copolymer 297175-47-4P, ESCN 220 acrylate-glycidyl methacrylate-hexahydrophthalic anhydride copolymer
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (aqueous alkali-developable **photosensitive** acrylic epoxy resin compns. for solder resists and printed wiring boards thereof)
- IT 15625-89-5, Trimethylolpropane triacrylate 108673-46-7
 RL: TEM (Technical or engineered material use); USES (Uses)
 (aqueous alkali-developable **photosensitive** acrylic epoxy resin compns. for solder resists and printed wiring boards thereof)

L17 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1994:712178 HCAPLUS

DOCUMENT NUMBER: 121:312178

TITLE: Black photopolymerizable composition, hardened film therefrom, and manufacture of color filter for LCDs

INVENTOR(S): Ichinose, Naoko; Kato, Yoshinori; Kano, Hirokazu; Futamura, Nobuyuki

PATENT ASSIGNEE(S): Nippon Kayaku Kk, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 06067421	A	19940311	JP 1992-241473	19920819

PRIORITY APPLN. INFO.: JP 1992-241473

19920819

AB The title composition comprises a photopolymerizable compound cong. ≥ 1 ethylenic unsatd. double bond, a **photopolymn. initiator**, optionally a **photosensitive** resin, and carbon black grafted with a polymer compound The polymer compound may be a compound containing aziridine, oxazoline, N-hydroxyalkylamide, epoxy, isocyanate, vinyl, acrylic group, methacrylic group, a Si-containing

hydrolyzable group, and/or amino, or may be acrylic acid-styrene copolymer and polyoxyethylene as an essential component.

IT 158944-79-7D, grafted with carbon black

RL: DEV (Device component use); USES (Uses)

(photopolymerizable composition and manufacture of color filter for LCD)

RN 158944-79-7 HCAPLUS

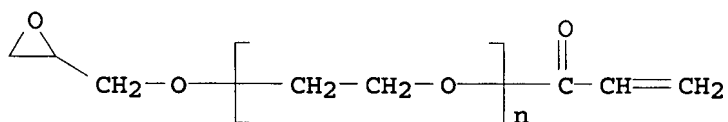
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with ethenylmethylbenzene and α -(1-oxo-2-propenyl)- ω -(oxiranylmethoxy)poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 120516-19-0

CMF (C2 H4 O)_n C6 H8 O3

CCI PMS



CM 2

CRN 25013-15-4

CMF C9 H10

CCI IDS



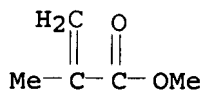
D1-Me

D1-CH=CH₂

CM 3

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03F007-027

ICS G02B005-20; G03C001-675; G03F007-004; G03F007-028

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 100-42-5D, polymer with maleic acid, phenol novolak epoxy acrylate, and dipentaerythritol hexaacrylate 110-16-7D, 2-Butenedioic acid (Z)-, polymer with styrene, dipentaerythritol hexaacrylate, phenol novolak epoxy acrylate 29570-58-9D, Dipentaerythritol hexaacrylate, polymer with styrene, maleic acid, and phenol novolak epoxy acrylate 123960-57-6D, Acrylamide-N-hydroxyethyl methacrylamide-N-vinylpyrrolidone copolymer, grafted with carbon black 158944-77-5D, grafted with carbon black 158944-78-6D, grafted with carbon black 158944-79-7D, grafted with carbon black 159339-41-0
 RL: DEV (Device component use); USES (Uses)
 (photopolymerizable composition and manufacture of color filter for LCD)

L17 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1994:137301 HCAPLUS

DOCUMENT NUMBER: 120:137301

TITLE: Active energy ray-curable water-based overcoat varnishes

INVENTOR(S): Sato, Koji; Tatenno, Hiroyuki

PATENT ASSIGNEE(S): Toyo Ink Mfg Co, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 05202317	A	19930810	JP 1992-34457	199201 24
PRIORITY APPLN. INFO.: JP 1992-34457				199201 24

AB The title water-washable varnishes with swelling resistance contain water-soluble or water-dispersible (meth)acrylic monomers containing OH, carboxyl groups (alkali metal salts), carboxylic acid amide groups, sulfonate groups (alkali metal salts), epoxide groups, or ether groups and H₂O and optional water-soluble or water-dispersible radical polymerizable prepolymers or non-radical polymerizable resins, and active energy ray-curable initiators. Thus, a coating composed of bisphenol A ethylene oxide adduct (1:4) monoacrylate 40.0, ditrimethylolpropane phthalic acid ester triacrylate 39.4, Irgacure 907 2, Irgacure 184 3, KM 788 (slipping agent) 0.5, FS Antifoam 013B (antifoaming agent) 0.1, and H₂O 15% was applied onto a paper and irradiated by 120-W/cm high pressure mercury lamp to give a test piece with smooth surface, water washability, and swelling resistance.

IT 152383-47-6P

RL: PREP (Preparation)

(preparation of, aqueous coatings, activated energy-ray curable, with water washability and swelling resistance)

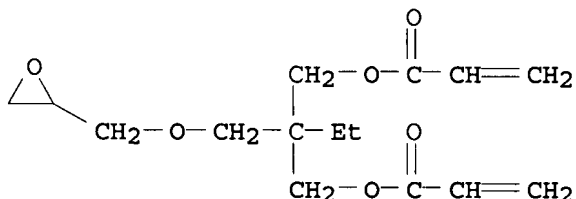
RN 152383-47-6 HCAPLUS

CN 2-Propenoic acid, 2-ethyl-2-[(oxiranylmethoxy)methyl]-1,3-propanediyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 152383-46-5

CMF C15 H22 O6



IC ICM C09D004-02

CC 42-10 (Coatings, Inks, and Related Products)

IT 947-19-3, Irgacure 184 71868-10-5, Irgacure 907

RL: USES (Uses)

(photoinitiators, for activated energy-ray curable water-based varnish overcoats)

IT 72037-98-0P 152383-42-1P 152383-43-2P 152383-45-4P
 152383-47-6P 152383-48-7P 152880-25-6P 152923-05-2P
 153146-85-1P

RL: PREP (Preparation)

(preparation of, aqueous coatings, activated energy-ray curable, with water washability and swelling resistance)

L17 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:202925 HCAPLUS

DOCUMENT NUMBER: 110:202925

TITLE: Photosensitive resin compositions for relief plates

INVENTOR(S): Kawaguchi, Chitoshi; Kawanami, Toshitaka

PATENT ASSIGNEE(S): Nippon Paint Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63177130	A	19880721	JP 1987-8816	19870117
JP 08010331	B	19960131		
PRIORITY APPLN. INFO.:			JP 1987-8816	19870117

AB The title compns., providing desirable hardness and rubbery resilience, contain partially saponified poly(vinyl alc.) (degree of saponification 70-99 mol %, d.p. 200-2000), monomer $XCH_2CH(OH)CH_2Y$ [$X = (OCHR_1CH_2)_n(OR_2)_mO_2CCR_3:CH_2$; $Y = OH, O_2CCR_4:CH_2, O_2C(CH_2)_pOH, OR_5$; $R_1, R_3, R_4 = H, Me$; $R_2 = OH$ group-containing C1-5 alkylene; $R_5 = OH$ group-containing C1-5 alkyl; $n = 4-23$; $m = 0, 1$; $p = 1-5$] containing ≥ 2 OH groups, and photoinitiator. A typical

composition, providing relief plate with Shore A hardness 880° and resilience (JIS K 6301) 15% and high resolution, comprised partially saponified poly(vinyl acetate) (d.p. 500, degree of saponification 80.1 mol %) 100, water 80, p-methoxyglycol 10, and Epolite 400E methacryloylate 80 parts.

IT 120516-18-9

RL: USES (Uses)

(photocurable, containing partially saponified poly(vinyl acetate), for relief plates with good hardness and resolution)

RN 120516-18-9 HCAPLUS

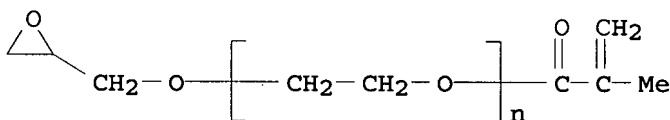
CN Poly(oxy-1,2-ethanediyl), α -(2-methyl-1-oxo-2-propenyl)-
 ω -(oxiranylmethoxy)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 120516-17-8

CMF (C2 H4 O)_n C7 H10 O3

CCI PMS



IC ICM G03C001-68

ICS C08F002-48; C08F020-28; G03C001-68; G03F007-02

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST epoxy methacrylate **photosensitive** printing plate; hardness epoxy methacrylate printing plate; resilience epoxy methacrylate printing plate; polyvinyl alc printing plate

IT 79134-44-4, Epolite 400E methacrylate 87719-53-7, Epolite 400E acrylate 120516-18-9 120516-20-3

RL: USES (Uses)

(photocurable, containing partially saponified poly(vinyl acetate), for relief plates with good hardness and resolution)

=> d 118 ibib abs fhitr hitind 1-10

L18 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:141394 HCAPLUS

DOCUMENT NUMBER: 142:249442

TITLE: Alkali-developable radiation curable composition

INVENTOR(S): Chew, Kong Chin

PATENT ASSIGNEE(S): Surface Specialties, S. A., Belg.

SOURCE: PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2005015309	A2	20050217	WO 2004-EP7731	200407

13

WO 2005015309

A3

20050421

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

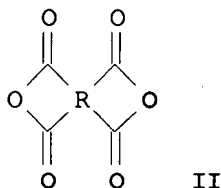
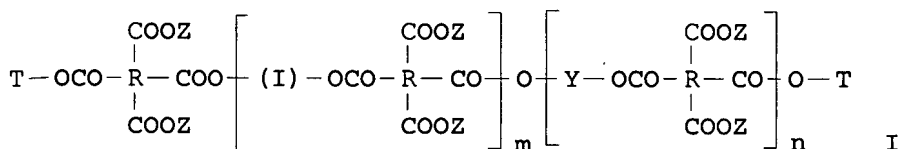
MY 2003-2693

A

200307

17

GI



AB The invention provides a radiation curable polymer described as dianhydride- polyol extended epoxy acrylate bearing carboxylic groups, as represented by Formula I (the radiation curable polymer is derived by reacting compound(1), compound (2) and compound (3), optionally further reacting with compound (4) and compound (5); compound (1) has at least 2 secondary hydroxyl groups and at least 2 (meth)acrylate groups; compound (2) is a dianhydride compound of formula II; compound (3) is selected from polyols with at least 2 primary hydroxyl groups; compound (4) is a monofunctional alc. selected from alkyl alcs. of C2-20, methoxy alkyl alcs. of C2-20, (meth)acrylate compound containing a primary or secondary hydroxyl group; compound (5) is a epoxy containing unsatd. compound); which is useful in alkali-developable **photosensitive** formulations for the fabrication of printed circuit boards or flat panel displays.

IT 844658-24-8P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(alkali-developable radiation curable composition)

RN 844658-24-8 HCAPLUS

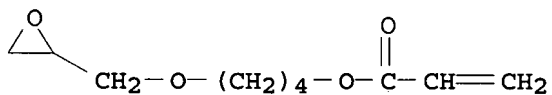
CN Hexanedioic acid, polymer with 1H,3H-benzo[1,2-c:4,5-c']difuran-

1,3,5,7-tetrone, 2,2-dimethyl-1,3-propanediol, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] di-2-propenoate and 4-(oxiranylmethoxy)butyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 119692-59-0

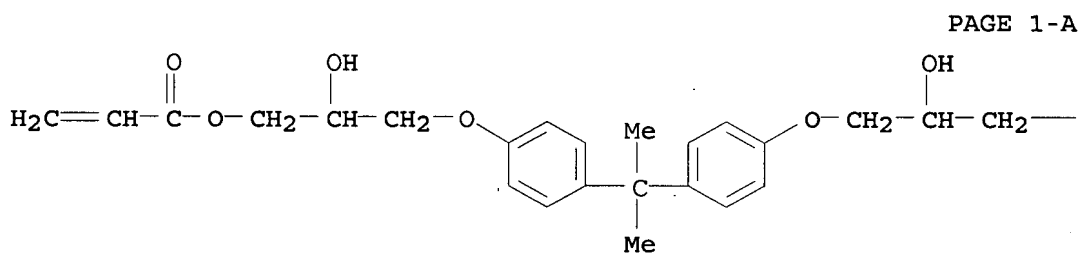
CMF C10 H16 O4



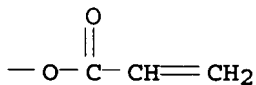
CM 2

CRN 4687-94-9

CMF C27 H32 O8



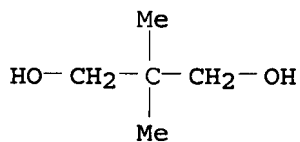
PAGE 1-B



CM 3

CRN 126-30-7

CMF C5 H12 O2



CM 4

CRN 124-04-9

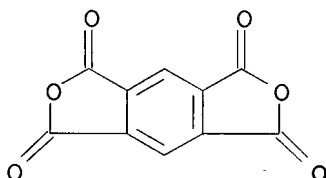
CMF C6 H10 O4

 $\text{HO}_2\text{C}-(\text{CH}_2)_4-\text{CO}_2\text{H}$

CM 5

CRN 89-32-7

CMF C10 H2 O6



IC ICM G03F001-00

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

IT 844658-23-7P **844658-24-8P** 844658-25-9P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(alkali-developable radiation curable composition)

L18 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:271985 HCAPLUS

DOCUMENT NUMBER: 140:294703

TITLE: Manufacture of dry imaging material with improved dust resistant and storage stability

INVENTOR(S): Hanyu, Takeshi

PATENT ASSIGNEE(S): Konica Minolta Holdings Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 29 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004101802	A	20040402	JP 2002-262596	20020909

PRIORITY APPLN. INFO.:

JP 2002-262596

20020909

OTHER SOURCE(S): MARPAT 140:294703

AB Title imaging material is manufactured by treating a polyester substrate by corona discharge, plasma discharge, UV radiation, electron beam radiation, or X-ray radiation, applying an undercoat to the treated substrate, and forming a **photosensitive** layer containing **photosensitive** silver halide particles, organic silver salts,

reducing agents, and binding agents. The process is characterized in that the undercoat-forming material is added oxidizing agent and is heat-treated at 60-100°; when the undercoat is dried, the coated polyester substrate is heated to 80-30° for curing.

IT 676261-69-1

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(manufacture of dry imaging material with improved dust resistant and storage stability)

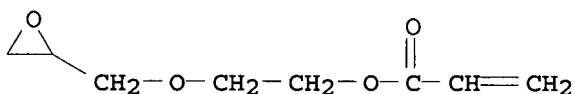
RN 676261-69-1 HCAPLUS

CN 2-Propenoic acid, butyl ester, polymer with ethenylbenzene, ethyl 2-propenoate and 2-(oxiranylmethoxy)ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 30491-78-2

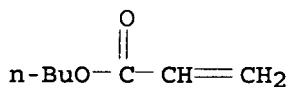
CMF C8 H12 O4



CM 2

CRN 141-32-2

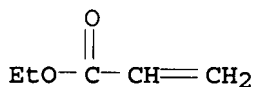
CMF C7 H12 O2



CM 3

CRN 140-88-5

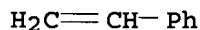
CMF C5 H8 O2



CM 4

CRN 100-42-5

CMF C8 H8



IC ICM G03C001-76

ICS G03C001-498; G03C001-74
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 IT 9011-08-9 52192-09-3 661467-61-4 661467-63-6 661467-64-7
 661467-65-8 661467-67-0 661467-69-2 661467-71-6 661467-73-8
 668448-44-0 **676261-69-1**
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (manufacture of dry imaging material with improved dust resistant and storage stability)

L18 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:653443 HCAPLUS

DOCUMENT NUMBER: 139:188347

TITLE: **Photosensitive** lithographic printing plate material, its manufacture, and aqueous coating solution for the manufacture

INVENTOR(S): Kuroki, Takaaki; Hirabayashi, Kazuhiko

PATENT ASSIGNEE(S): Konica Co., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 26 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2003233170	A	20030822	JP 2002-33872	20020212
				20020212

PRIORITY APPLN. INFO.:

JP 2002-33872

AB The printing plate material has an intermediate layer between a substrate and a photopolymerizable layer containing ethylenically addition-polymerizable compds. and radical generators sensitive to actinic energy beam. In manufacturing the printing plate, the intermediate layer is formed by coating process, where the layer is heated at the maximum plate surface temperature 105-250°. Preferably, the substrate is electrochem. surface-roughened with an acidic medium and then treated with an aqueous solution containing polyvinylphosphonic acid before formation of the intermediate layer. Also claimed is an aqueous coating solution containing ethylenically addition-polymerizable compds., ring-opening polymerizable compds., amino group-containing compds., or alkoxy group-containing compds. for formation of the intermediate layer. The obtained printing plate material has high interlayer adhesion, printability, and background soiling resistance.

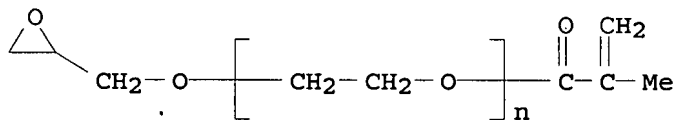
IT **120516-17-8**

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(intermediate layer component; heat treatment of intermediate layer in manufacture of **photosensitive** lithog. printing plate material for high interlayer adhesion)

RN 120516-17-8 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -(2-methyl-1-oxo-2-propenyl)- ω -(oxiranylmethoxy)- (9CI) (CA INDEX NAME)



- IC ICM G03F007-00
ICS B41N001-14; B41N003-03; B41N003-04; C25D011-16; G03F007-11;
G03F007-38
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
- ST **photosensitive** lithog printing plate manuf heat treatment;
aq coating soln intermediate layer formation lithog printing;
interlayer adhesion printability soiling resistance lithog printing
plate
- IT Surface treatment
(electrolytic surface roughening; heat treatment of intermediate
layer in manufacture of **photosensitive** lithog. printing
plate material for high interlayer adhesion)
- IT Heat treatment
Lithographic plates
Photoimaging materials
(heat treatment of intermediate layer in manufacture of
photosensitive lithog. printing plate material for high
interlayer adhesion)
- IT Coating materials
(water-thinned, solution for; heat treatment of intermediate layer
in manufacture of **photosensitive** lithog. printing plate
material for high interlayer adhesion)
- IT 102772-82-7, Acrylonitrile-ethyl methacrylate-methacrylic
acid-methyl methacrylate copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(binder of photopolymerizable layer; heat treatment of
intermediate layer in manufacture of **photosensitive** lithog.
printing plate material for high interlayer adhesion)
- IT 78-10-4, KBE 04 107-95-9, 3-Aminopropionic acid 2530-85-0, TSL
8370 2867-47-2 5039-78-1 7659-36-1 18165-31-6, Ethoxysilane
35705-94-3, Phosmer PE 55750-22-6 114040-41-4
120516-17-8 581094-56-6, EX 5000H
RL: PEP (Physical, engineering or chemical process); PYP (Physical
process); TEM (Technical or engineered material use); PROC
(Process); USES (Uses)
(intermediate layer component; heat treatment of intermediate
layer in manufacture of **photosensitive** lithog. printing
plate material for high interlayer adhesion)
- IT 40220-08-4, Aronix M 315
RL: TEM (Technical or engineered material use); USES (Uses)
(photopolymerizable layer component; heat treatment of
intermediate layer in manufacture of **photosensitive** lithog.
printing plate material for high interlayer adhesion)
- IT 27754-99-0, Polyvinylphosphonic acid
RL: NUU (Other use, unclassified); USES (Uses)
(substrate-treating agent; heat treatment of intermediate layer
in manufacture of **photosensitive** lithog. printing plate
material for high interlayer adhesion)
- IT 37321-70-3, A1050
RL: CPS (Chemical process); PEP (Physical, engineering or chemical
process); PYP (Physical process); TEM (Technical or engineered

material use); PROC (Process); USES (Uses)
 (substrate; heat treatment of intermediate layer in manufacture of
photosensitive lithog. printing plate material for high
 interlayer adhesion)

L18 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:653439 HCAPLUS

DOCUMENT NUMBER: 139:205049

TITLE: **Photosensitive** lithographic printing
 plate material and its manufacture

INVENTOR(S): Kuroki, Takaaki; Hirabayashi, Kazuhiko

PATENT ASSIGNEE(S): Konica Co., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2003233166	A	20030822	JP 2002-30825	200202 07
				200202 07

PRIORITY APPLN. INFO.: JP 2002-30825

AB The printing plate material has a layer containing (a) a compound having ring-opening polymerizable groups and a compound having ethylenically addition-polymerizable groups or (b) a compound having ring-opening polymerizable groups and ethylenically addition-polymerizable groups on a metal substrate which is surface-roughened and treated with an aqueous solvent containing polyvinylphosphonic acid. The layer may be an intermediate layer formed between the substrate and a photopolymerizable layer. In manufacturing the printing plate material, the intermediate layer is formed by applying a coating solution containing a compound having ≥ 2 ring-opening polymerizable groups and a compound having acid-releasing groups and ethylenically addition-polymerizable groups on the surface-treated metal substrate. Preferably, the substrate is electrochem. surface-roughened with an acidic medium and then treated with an aqueous solution containing polyvinylphosphonic acid before formation of the intermediate layer. The obtained printing plate material has high interlayer adhesion, printability, and background soiling resistance.

IT 120516-17-8

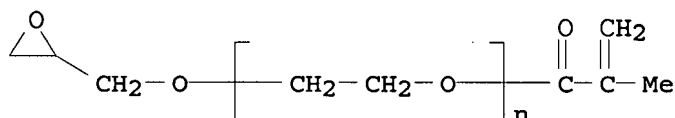
RL: TEM (Technical or engineered material use); USES (Uses)

(manufacture of **photosensitive** lithog. printing plate

material having layer containing polymerizable compound for high
 interlayer adhesion)

RN 120516-17-8 HCAPLUS

CN Poly(oxy-1,2-ethanediy1), α -(2-methyl-1-oxo-2-propenyl)-
 ω -(oxiranylmethoxy)- (9CI) (CA INDEX NAME)



- IC ICM G03F007-00
ICS B41N001-08; G03F007-028; G03F007-09; G03F007-11
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST **photosensitive** lithog printing plate manuf polymerizable compd; interlayer adhesion printability soiling resistance lithog printing plate
- IT Surface treatment
(electrolytic surface roughening; manufacture of **photosensitive** lithog. printing plate material having layer containing polymerizable compound for high interlayer adhesion)
- IT Lithographic plates
Photoimaging materials
(manufacture of **photosensitive** lithog. printing plate material having layer containing polymerizable compound for high interlayer adhesion)
- IT 581094-56-6, EX 5000H
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(manufacture of **photosensitive** lithog. printing plate material having layer containing polymerizable compound for high interlayer adhesion)
- IT 79-10-7, 2-Propenoic acid, uses 79-41-4, uses 4206-61-5
17557-20-9 17626-93-6 24615-84-7 26403-72-5 27252-81-9
55750-22-6 114040-41-4 120516-17-8 131303-16-7
581785-72-0 581785-73-1 581785-74-2
RL: TEM (Technical or engineered material use); USES (Uses)
(manufacture of **photosensitive** lithog. printing plate material having layer containing polymerizable compound for high interlayer adhesion)
- IT 27754-99-0, Polyvinylphosphonic acid
RL: NUU (Other use, unclassified); USES (Uses)
(substrate-treating agent; manufacture of **photosensitive** lithog. printing plate material having layer containing polymerizable compound for high interlayer adhesion)
- IT 37321-70-3, A1050
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(substrate; manufacture of **photosensitive** lithog. printing plate material having layer containing polymerizable compound for high interlayer adhesion)

L18 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:632151 HCAPLUS

DOCUMENT NUMBER: 135:218763

TITLE: Photothermographic material, image formation, heat development method, and sheet substrate

INVENTOR(S): Hanyu, Takeshi; Usakawa, Yasushi

PATENT ASSIGNEE(S): Konica Co., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 59 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001235831	A	20010831	JP 2000-44356	20000222
PRIORITY APPLN. INFO.:			JP 2000-44356	20000222

AB The material, having ≥ 1 layer on a support, containing a **photosensitive** Ag halide grains, an organic Ag salt, and a reducing agent, contains a fluorosurfactant with average mol. weight 1800-15000 (not including 15000), comprising a copolymer of (a) a (meth)acrylate with F-containing aliphatic group (Rf) and (b) a poly[oxyalkylene (meth)acrylate], where all the monomer unit content of (a) is 2-24 weight% and Rf contains C1-26 and F atom of 18-83 weight% to it (the fluorosurfactant is not N-butylperfluorooctanesulfonamido ethyl acrylate-methylheptaoxyethylene acrylate copolymer with average mol. weight 15000). The material may contain ≥ 2 kinds of fluorosurfactant comprising (i) a copolymer of (a) and (b), where (a) content is 2-86 weight% and Rf contains C1-26 and F atom of 18-83 weight% to it, and (ii) an anionic surfactant with Rf group and whose F atom content 18-83 weight%. The material may contain ≥ 2 kinds of fluorosurfactant comprising (i) a copolymer of (a), (b), and (c) (meth)acrylate with glycidyl group, in which contents of (a) and (c) are 2-86 and 2-70 weight% resp. and Rf contains C1-26 and F atom of 18-83 weight% to it, and (ii) an anionic surfactant with Rf group and whose F atom content 18-83 weight%. The material is also claimed, containing R1R2R3R4Q+. (A1)-L1ZL2(A2)-.Q+R1R2R3R4 (Q = N, P; R1-4 = substituents to Q, ≥ 1 of which contains F atom; A1, A2 = anion; L1, L2 = bivalent linkage; Z = group with alkylene oxide unit). Those materials are imagewise exposed by focused laser beam with multi-spectra and then heat-developed by using a press roll made of a silicone rubber containing a metal oxide, oppositely positioned to a drum or roll heated at 80-180° in a developing machine. The sheet substrate has a layer containing Rt1(A1)-.R1R2R3P+L1Z1L2P+R4R5R6. (A2)-Rt2 [P = P atom; Rt1, Rt2 = each (substituted) aliphatic, aromatic, or heterocyclic group; A1, A2 = anion; R1-6 = H, substituent of H, L1, L2 = bivalent linkage; Z1 = Z]. The material shows improved uniform coating, storage stability before and after processing, conveying properties, abrasion resistance, and dirt prevention, low fog, and high sensitivity.

IT 357972-55-5
 RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)

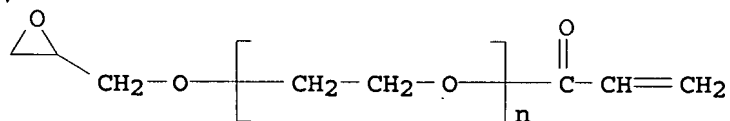
(photothermog material containing fluorosurfactant)

RN 357972-55-5 HCAPLUS

CN 2-Propenoic acid, 2-[(2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-heptafluoro-1-oxononyl)amino]ethyl ester, polymer with α -(1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl) and α -(1-oxo-2-propenyl)- ω -(oxiranylethoxy)poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

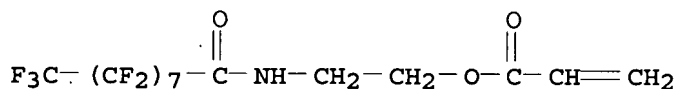
CM 1

CRN 120516-19-0
 CMF (C2 H4 O)_n C6 H8 O3
 CCI PMS



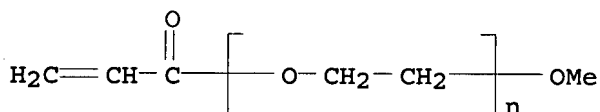
CM 2

CRN 92417-19-1
 CMF C14 H8 F17 N O3



CM 3

CRN 32171-39-4
 CMF (C2 H4 O)_n C4 H6 O2
 CCI PMS



IC ICM G03C001-498
 ICS G03C001-76
 CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 IT 112783-35-4 357972-51-1 357972-52-2 357972-53-3 357972-54-4
 357972-55-5 357972-56-6 357973-47-8
 357973-48-9 357973-49-0
 RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
 (photothermog material containing fluorosurfactant)

L18 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2000:317204 HCAPLUS
 DOCUMENT NUMBER: 132:341249
 TITLE: Heat development **photosensitive** material
 INVENTOR(S): Muramatsu, Yasuhiko
 PATENT ASSIGNEE(S): Konica Co., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 40 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 2000137307	A	20000516	JP 1998-310250	199810 30
PRIORITY APPLN. INFO.: JP 1998-310250				199810 30

OTHER SOURCE(S): MARPAT 132:341249

AB The title **photosensitive** material contains an organic Ag salt, **photosensitive** Ag halide grains, and a reducing agent on a support and is formed by adding an epoxy compound and an acid anhydride. The material shows high film strength and storage stability and provides high contrast black-and-white images even after storage for a long time of period.

IT 268226-68-2
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(heat-developable photog. material containing organic silver salt, silver halide, reducing agent, epoxy compd, and acid anhydride)

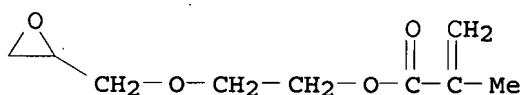
RN 268226-68-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(oxiranylmethoxy)ethyl ester, polymer with ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 30491-79-3

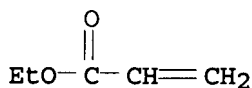
CMF C9 H14 O4



CM 2

CRN 140-88-5

CMF C5 H8 O2



IC ICM G03C001-498

CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 85-42-7 85-44-9, 1,3-Isobenzofurandione 108-30-5, uses
108-31-6, 2,5-Furandione, uses 716-39-2, Naphtho[2,3-c]furan-1,3-dione 1732-96-3 2224-15-9 3101-60-8 3126-63-4 3543-39-3
3568-29-4 4037-32-5 4206-61-5 5763-49-5 13236-02-7
19438-59-6 19438-61-0 26141-88-8 27550-59-0 27878-56-4

54140-67-9 86630-59-3 92243-48-6 98081-22-2 103296-84-0
 138652-14-9 233607-84-6 268226-67-1 268226-68-2
 RL: MOA (Modifier or additive use); TEM (Technical or engineered
 material use); USES (Uses)
 (heat-developable photog. material containing organic silver salt,
 silver halide, reducing agent, epoxy compd, and acid anhydride)

L18 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:658544 HCAPLUS

DOCUMENT NUMBER: 131:293306

TITLE: **Photosensitive resin composition,**
 pattern formation using it, and semiconductor
 device

INVENTOR(S): Sasaki, Akihiro

PATENT ASSIGNEE(S): Hitachi Chemical Du Pont Micro System Co., Ltd.,
 Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

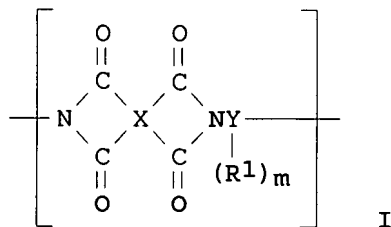
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 11282160	A	19991015	JP 1998-85285	199803 31
			JP 1998-85285	199803 31

PRIORITY APPLN. INFO.:

GI



AB The composition contains a polyimide having repeating units I (X = Si-containing tetravalent organic group; Y = trivalent or tetravalent organic group; R1 = photopolymerizable group-containing organic group; m = 1-2 integers). The method involves irradiating active energy beam to a coating film comprising the composition and developing and removing its unirradiated region. The device comprises a polyimide film manufactured from the composition. The composition is useful for forming a thick film such as a surface protective film, an interlayer insulating film, etc. on a Si wafer at lower temperature. The composition shows excellent storage stability, solubility to an organic solvent, adhesion to a Si substrate, and heat resistance.

IT 246158-26-9P, 3,3',4,4'-Biphenyltetramine-bis(3,4-dicarboxyphenyl)dimethylsilane anhydride-2,2'-

bis(trifluoromethyl)benzidine-glycidoxypropyl methacrylate-glycidoxypropyltrimethoxysilane copolymer

RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyimide-based **photosensitive** resin for pattern formation in semiconductor device)

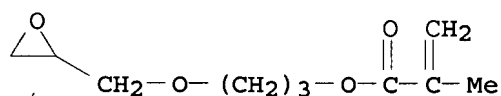
RN 246158-26-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(oxiranylmethoxy)propyl ester, polymer with [1,1'-biphenyl]-3,3',4,4'-tetramine, 2,2'-bis(trifluoromethyl)[1,1'-biphenyl]-4,4'-diamine, 5,5'-(dimethylsilylene)bis[1,3-isobenzofurandione] and trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

CM 1

CRN 118777-89-2

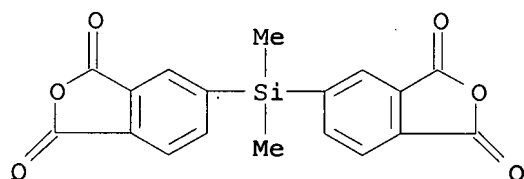
CMF C10 H16 O4



CM 2

CRN 42297-18-7

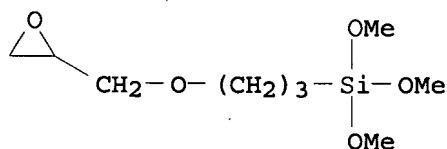
CMF C18 H12 O6 Si



CM 3

CRN 2530-83-8

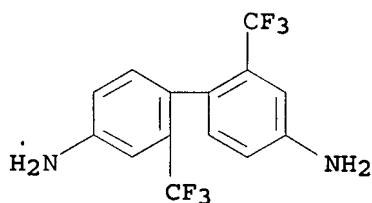
CMF C9 H20 O5 Si



CM 4

CRN 341-58-2

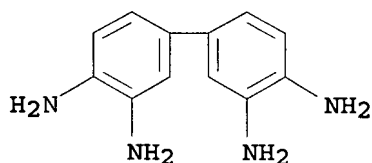
CMF C14 H10 F6 N2



CM 5

CRN 91-95-2

CMF C12 H14 N4



- IC ICM G03F007-038
ICS C08F290-14; C08F299-02; C08G073-12; G03F007-027; H01L021-027;
H01L021-312; H05K003-46
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 38, 76
- ST **photosensitive** polyimide resin pattern formation;
semiconductor device photoresist polyimide precursor; interlayer
insulator polyimide film semiconductor
- IT Photoresists
Semiconductor devices
(polyimide-based **photosensitive** resin for pattern
formation in semiconductor device)
- IT Polyimides, uses
RL: DEV (Device component use); TEM (Technical or engineered
material use); USES (Uses)
(polyimide-based **photosensitive** resin for pattern
formation in semiconductor device)
- IT **246158-26-9P**, 3,3',4,4'-Biphenyltetramine-bis(3,4-
dicarboxyphenyl)dimethylsilane anhydride-2,2'-
bis(trifluoromethyl)benzidine-glycidoxypentyl methacrylate-
glycidoxypentyltrimethoxysilane copolymer
RL: DEV (Device component use); IMF (Industrial manufacture); TEM
(Technical or engineered material use); PREP (Preparation); USES
(Uses)
(polyimide-based **photosensitive** resin for pattern
formation in semiconductor device)

L18 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:658543 HCAPLUS

DOCUMENT NUMBER: 131:293305

TITLE: **Photosensitive** resin composition,
pattern formation using it, and semiconductor
device

INVENTOR(S): Sasaki, Akihiro

PATENT ASSIGNEE(S): Hitachi Chemical Dupont Microsystems Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11282159	A	19991015	JP 1998-85284	19980331

PRIORITY APPLN. INFO.: JP 1998-85284
 19980331

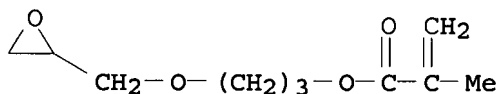
AB The composition comprises a polyimide precursor having repeating units [COX(R1CO)2CONHY(R2)nNH] (X = tetravalent organic group; Y = trivalent or tetravalent organic group; R1 = H, monovalent organic group; R2 = Si-containing group; n = 1-2 integers). The method involves irradiating active energy beam to a coating film comprising the composition via a patterned mask and developing and removing its unirradiated region. The device comprises a polyimide film manufactured from the composition. The composition is useful for forming a surface protective film, an interlayer insulating film, etc. The composition shows excellent storage stability, rapid developability, high transmittance of illumination light, and adhesion strength to a Si substrate after imidation.

IT 246249-91-2P
 RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyimide-based **photosensitive** resin for pattern formation in semiconductor device)

RN 246249-91-2 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, 3-(oxiranylmethoxy)propyl ester, polymer with 2-amino-5-(4-aminophenoxy)benzamide, [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 2,2'-difluoro[1,1'-biphenyl]-4,4'-diamine and trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

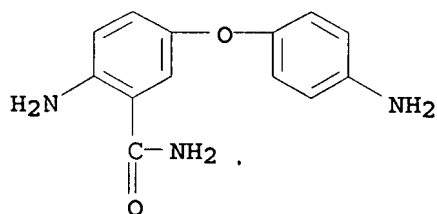
CM 1

CRN 118777-89-2
 CMF C10 H16 O4



CM 2

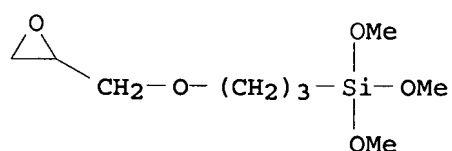
CRN 40763-98-2
 CMF C13 H13 N3 O2



CM 3

CRN 2530-83-8

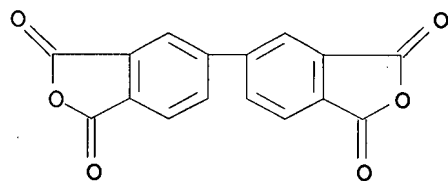
CMF C9 H20 O5 Si



CM 4

CRN 2420-87-3

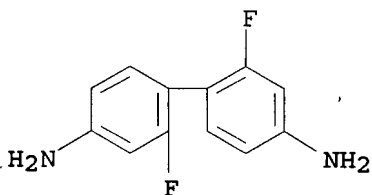
CMF C16 H6 O6



CM 5

CRN 316-64-3

CMF C12 H10 F2 N2



IC ICM G03F007-038

ICS G03F007-037; G03F007-11; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 76

ST **photosensitive** polyimide resin pattern formation;
semiconductor device photoresist polyimide precursor; interlayer
insulator polyimide film semiconductor

IT Photoresists
Semiconductor devices
(polyimide-based **photosensitive** resin for pattern
formation in semiconductor device)

IT Polyimides, uses
RL: DEV (Device component use); TEM (Technical or engineered
material use); USES (Uses)
(polyimide-based **photosensitive** resin for pattern
formation in semiconductor device)

IT 246249-90-1P **246249-91-2P** 246249-92-3P 246250-10-2P
RL: DEV (Device component use); IMF (Industrial manufacture); TEM
(Technical or engineered material use); PREP (Preparation); USES
(Uses)
(polyimide-based **photosensitive** resin for pattern
formation in semiconductor device)

L18 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:217664 HCAPLUS

DOCUMENT NUMBER: 128:302056

TITLE: Heat development **photosensitive**
material having layer containing epoxy compound
and isocyanate crosslinker

INVENTOR(S): Hatakeyama, Akira

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	
JP 10090826	A	19980410	JP 1996-266811	199609 17
PRIORITY APPLN. INFO.: JP 1996-266811				199609 17

AB Title material having a **photosensitive** layer containing
photosensitive Ag halides on ≥ 1 side of a support and
containing a non-**photosensitive** Ag salt and a reducing agent
for the salt, contains an epoxy compound having ≥ 1 epoxy group
in its mol. and an isocyanate crosslinking agent in ≥ 1 layer
on the **photosensitive** side and optionally phthalazine.
The material shows high sensitivity and low fog.

IT **205655-02-3P**

RL: DEV (Device component use); MOA (Modifier or additive use); PNU
(Preparation, unclassified); PREP (Preparation); USES (Uses)
(heat development silver halide photog. material having
antifoggant layer containing epoxy compound and isocyanate crosslinker)

RN 205655-02-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(oxiranylmethoxy)ethyl ester, polymer
with ethyl 2-propenoate and Sumidur N 3500 (9CI) (CA INDEX NAME)

CM 1

CRN 127464-53-3

CMF Unspecified

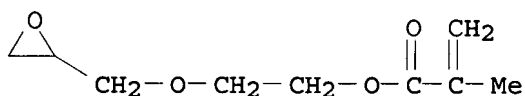
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 30491-79-3

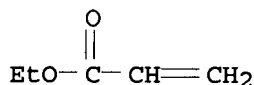
CMF C9 H14 O4



CM 3

CRN 140-88-5

CMF C5 H8 O2



IC ICM G03C001-498

ICS G03C001-498

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 205654-88-2P 205654-90-6P 205654-91-7P 205654-92-8P

205654-93-9P 205654-94-0P 205654-95-1P 205654-96-2P

205654-97-3P 205654-98-4P 205654-99-5P 205655-00-1P

205655-01-2P 205655-02-3P

RL: DEV (Device component use); MOA (Modifier or additive use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)

(heat development silver halide photog. material having antifoggant layer containing epoxy compound and isocyanate crosslinker)

L18 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:85462 HCAPLUS

DOCUMENT NUMBER: 110:85462

TITLE: Electrophotographic plates with polymer binders

INVENTOR(S): Taguchi, Takao; Kawakami, Hisami

PATENT ASSIGNEE(S): Toppan Printing Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----

JP 63199359

A

19880817

JP 1987-32878

198702

16

JP 05049218

B

19930723

JP 1987-32878

198702

16

PRIORITY APPLN. INFO.:

AB Binders for **photosensitive** layers of electrophotog. plates containing **photosensitive** pigments are copolymers with monomer units including methacrylic esters, acrylic esters, carboxylic acids, and epoxy-containing (meth)acrylic esters. These binders are heat-curable and provide high mech. strength and good electrophotog. performance. Thus, 40 g 50:5:5:50 Et methacrylate-glycidoxypropyl methacrylate-itaconic acid-Me acrylate copolymer, 80 g ZnO sensitized with tetraiodofluorescein, and solvents were dispersed and the mixture was coated on subbed conductive paper and dried to obtain an electrophotog. plate. The plate was chargeable to 480 V and showed high sensitivity and low residual voltage. High resistance to pressure application and abrasion was also shown.

IT 118777-90-5

RL: USES (Uses)

(binder, heat-curable, for electrophotog. plates)

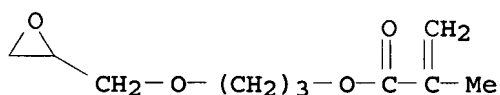
RN 118777-90-5 HCAPLUS

CN Butanedioic acid, methylene-, polymer with ethyl 2-methyl-2-propenoate, methyl 2-propenoate and 3-(oxiranylmethoxy)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 118777-89-2

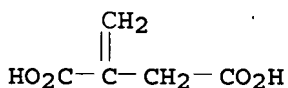
CMF C10 H16 O4



CM 2

CRN 97-65-4

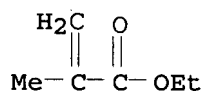
CMF C5 H6 O4



CM 3

CRN 97-63-2

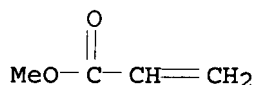
CMF C6 H10 O2



CM 4

CRN 96-33-3

CMF C4 H6 O2



IC ICM G03G005-05

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 118777-90-5

RL: USES (Uses)

(binder, heat-curable, for electrophotog. plates)

=> d 126 ibib abs fhitr hitind 1-18

L26 ANSWER 1 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:597863 HCAPLUS

DOCUMENT NUMBER: 145:74853

TITLE: Positive-working photosensitive compositions suitable for solder resists and photosensitive dry films

INVENTOR(S): Hirakawa, Makoto; Takei, Masao; Niizuma, Hiroshi

PATENT ASSIGNEE(S): Toa Gosei Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2006162897	A	20060622	JP 2004-353381	20041206
PRIORITY APPLN. INFO.:			JP 2004-353381	20041206

OTHER SOURCE(S): MARPAT 145:74853

AB The photosensitive compns. contain (A) bisphenol-type epoxy (meth)acrylates bearing carboxy groups, (B) polyether polyol urethane (meth)acrylates, (C) ethylenic monomers, (D) (meth)acrylic acids (esters) copolymers, (E) photopolymerization initiators, and (F) heat-polymerization catalysts. The compns.

provide flexible elec. insulating coatings with high water
- and heat resistance.

IT 890084-42-1P

RL: IMF (Industrial manufacture); TEM (Technical or
engineered material use); PREP (Preparation); USES (Uses)
(cured solder resists; pos. photosensitive compns. for solder
resists and photosensitive dry films)

RN 890084-42-1 HCAPLUS

CN 2-Propenoic acid, ester with 2,2'-[oxybis(methylene)]bis[2-
(hydroxymethyl)-1,3-propanediol], polymer with (chloromethyl)oxirane
polymer with 4,4'-(1-methylethylidene)bis[phenol] hydrogen
1,2-benzenedicarboxylate 2-propenoate and NK Oligo UA 340P (9CI)
(CA INDEX NAME)

CM 1

CRN 300371-40-8

CMF Unspecified

CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

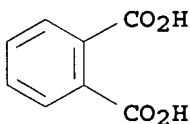
CRN 746620-11-1

CMF (C15 H16 O2 . C3 H5 Cl O)x . x C8 H6 O4 . x C3 H4 O2

CM 3

CRN 88-99-3

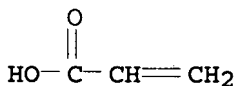
CMF C8 H6 O4



CM 4

CRN 79-10-7

CMF C3 H4 O2



CM 5

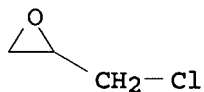
CRN 25068-38-6

CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

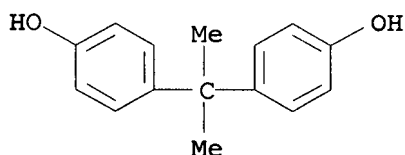
CM 6

CRN 106-89-8
CMF C3 H5 Cl O



CM 7

CRN 80-05-7
CMF C15 H16 O2

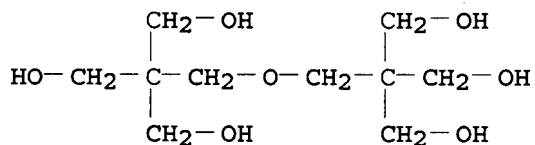


CM 8

CRN 77641-99-7
CMF C10 H22 O7 . x C3 H4 O2

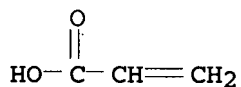
CM 9

CRN 126-58-9
CMF C10 H22 O7



CM 10

CRN 79-10-7
CMF C3 H4 O2



CC 76-3 (Electric Phenomena)

Section cross-reference(s): 38, 74

IT 890084-42-1P 890084-43-2P, Epikote 828 ester with acrylic acid and phthalic anhydride, polymer with UA 340P and Aronix M 233 891828-17-4P, Epikote 828 ester with acrylic acid

and phthalic anhydride, polymer with UA 340P, UA 4100 and Aronix M 400

RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; **USES (Uses)** (cured solder resists; pos. photosensitive compns. for solder resists and photosensitive dry films)

IT 71868-10-5, Irgacure 907

RL: **CAT (Catalyst use)**; TEM (Technical or engineered material use); **USES (Uses)**

(**photopolymn. initiators**; in pos. **photosensitive compns.** for solder resists and photosensitive dry films)

L26 ANSWER 2 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:1102840 HCAPLUS

DOCUMENT NUMBER: 143:396346

TITLE: **Water-developable photosensitive resin composition for manufacturing flexographic printing plate showing impact resilience**
 INVENTOR(S): Hirai, Takaaki; Takagi, Toshiya; Yoshida, Masatoshi; Kahara, Koji

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan; Nippon Shokubai Co., Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2005283854	A	20051013	JP 2004-95972	20040329
PRIORITY APPLN. INFO.: JP 2004-95972				20040329

AB The title resin **composition** comprises a **photopolymn. initiator** and a urethane resin prepared from a carboxyl group-containing polymer (A), a urethane prepolymer (B), and a photopolymerizable unsatd. monomer (C) having OH or carboxyl groups, wherein the (A) has an acid value of ≥ 130 mgKOH/g and a glass transition temperature of $\leq 0^\circ$, and the urethane resin was prepared from 100 parts of (A) and ≥ 200 parts of (B) and (C).

IT **866540-04-7P**, Pluronic L 44-Carbodiol D 2000-Kuraray Polyol P 2010-4,4'-diphenylmethane diisocyanate-2-hydroxyethyl acrylate copolymer

RL: **PNU (Preparation, unclassified)**; TEM (Technical or engineered material use); **PREP (Preparation)**; **USES (Uses)** (**water-developable photosensitive resin composition for manufacturing flexog. printing plate showing impact resilience**)

RN 866540-04-7 HCAPLUS

CN Hexanedioic acid, polymer with Carbodiol D 2000, 2-hydroxyethyl 2-propenoate, 1,1'-methylenebis[4-isocyanatobenzene], methyloxirane, 3-methyl-1,5-pentanediol and oxirane (9CI) (CA INDEX NAME)

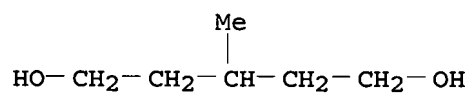
CM 1

CRN 127670-07-9
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

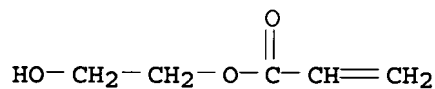
CM 2

CRN 4457-71-0
CMF C6 H14 O2



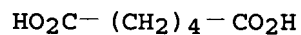
CM 3

CRN 818-61-1
CMF C5 H8 O3



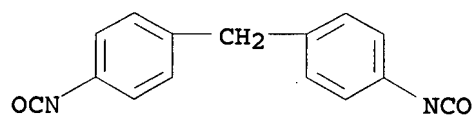
CM 4

CRN 124-04-9
CMF C6 H10 O4



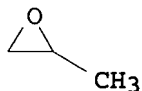
CM 5

CRN 101-68-8
CMF C15 H10 N2 O2



CM 6

CRN 75-56-9
CMF C3 H6 O



CM 7

CRN 75-21-8

CMF C2 H4 O



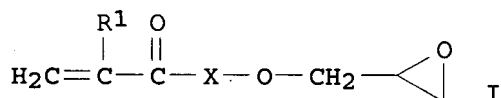
- IC ICM G03F007-027
ICS G03F007-00
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST photosensitive resin compn **water** developable flexog printing plate fabrication
- IT Polyurethanes, preparation
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylates; **water**-developable photosensitive resin composition for manufacturing flexog. printing plate showing impact resilience)
- IT Photoimaging materials
(photopolymerizable; **water**-developable photosensitive resin composition for manufacturing flexog. printing plate showing impact resilience)
- IT Flexographic printing plates
(photosensitive; **water**-developable photosensitive resin composition for manufacturing flexog. printing plate showing impact resilience)
- IT 95-71-6, Methylhydroquinone 24650-42-8, 2,2-Dimethoxy-1,2-diphenylethan-1-one
RL: CAT (Catalyst use); USES (Uses)
(**water**-developable photosensitive resin composition for manufacturing flexog. printing plate showing impact resilience)
- IT 25119-83-9P, Acrylic acid-butyl acrylate copolymer 25135-39-1P, Acrylic acid-ethyl acrylate-methyl methacrylate copolymer 26300-51-6P, Acrylic acid-butyl acrylate-methyl methacrylate copolymer 866540-04-7P, Pluronic L 44-Carbodiol D 2000-Kuraray Polyol P 2010-4,4'-diphenylmethane diisocyanate-2-hydroxyethyl acrylate copolymer 866540-05-8P 866540-06-9P 866540-07-0P 866594-82-3P, Pluronic L 44-Kuraray Polyol P 2010-hexamethylene diisocyanate copolymer reaction products with 2-hydroxyethyl acrylate
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**water**-developable photosensitive resin composition for manufacturing flexog. printing plate showing impact resilience)
- IT 174394-54-8, IRR 213
RL: TEM (Technical or engineered material use); USES (Uses)
(**water**-developable photosensitive resin composition for manufacturing flexog. printing plate showing impact resilience)

L26 ANSWER 3 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:731708 HCAPLUS
 DOCUMENT NUMBER: 143:174417
 TITLE: Preparation of hydrogels with good affinity to various compounds and highly sensitive photopolymer compositions therefor
 INVENTOR(S): Sawada, Masanori; Nakajima, Hiromitsu; Hayakawa, Hiroshi
 PATENT ASSIGNEE(S): Toyo Gosei Co., Ltd., Japan; NOF Corporation
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005213349	A	20050811	JP 2004-20957	20040129
PRIORITY APPLN. INFO.:			JP 2004-20957	20040129

GI



- AB The compns. contain (A) crosslinkable resins prepared by ring-opening addition of I [R¹ = H, Me; X = (OX₁)_n; OX₁ = C₂-4 oxyalkylene; n = 1-100] onto (neutralized) carboxy and/or phenolic OH groups in side chains of resins, (B) **photopolymer. initiators**, and (C) **water**. In the process, the compns. are photopolymerized to give hydrogels, useful for immobilization of immobilization of bioactive substances, cells, enzymes, etc., for diagnostic agents or wastewater treatment. The compns. can also be patterned like ordinary photoresists. Thus, poly(acrylic acid) (Aqualic AS 58) was reacted with ethylene oxide-propylene oxide copolymer monomethacrylate monoglycidyl ether (70PGEP 350B) and mixed with 1-[4-(2-hydroxyethoxy)phenyl]-2-hydroxy-2-methyl-1-propan-1-one (Irgacure 2959) to give an **aqueous** composition, which was UV cured to give a hydrogel. 5.5 G of Fe ball was mounted on the hydrogel without sinking.
- IT **861405-38-1P**, Aqualic AS 58 ester with 70PGEP350B, homopolymer
 RL: BUU (Biological use, unclassified); **IMF** (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); BIOL (Biological study); **PREP** (Preparation); RACT (Reactant or reagent); USES (Uses)
 (crosslinked; highly sensitive photopolymer compns. for preparation of hydrogels with good affinity to various compds.)
- RN **861405-38-1** HCAPLUS
 CN 2-Propenoic acid, homopolymer, ester with methyloxirane polymer with

oxirane mono(2-methyl-2-propenoate) 2,3-dihydroxypropyl ether,
homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 861660-33-5

CMF C4 H6 O2 . x C3 H8 O3 . x (C3 H6 O . C2 H4 O)x . x (C3 H4 O2)x

CM 2

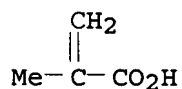
CRN 861405-36-9

CMF C4 H6 O2 . C3 H8 O3 . (C3 H6 O . C2 H4 O)x

CM 3

CRN 79-41-4

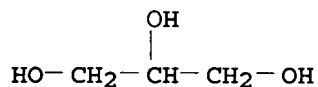
CMF C4 H6 O2



CM 4

CRN 56-81-5

CMF C3 H8 O3



CM 5

CRN 9003-11-6

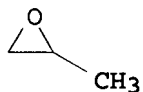
CMF (C3 H6 O . C2 H4 O)x

CCI PMS

CM 6

CRN 75-56-9

CMF C3 H6 O



CM 7

CRN 75-21-8

CMF C2 H4 O

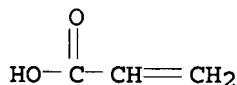


CM 8

CRN 9003-01-4
 CMF (C3 H4 O2)x
 CCI PMS

CM 9

CRN 79-10-7
 CMF C3 H4 O2



IC ICM C08F299-00
 ICS C08F290-08

CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 9, 74

IT **861405-38-1P**, Aqualic AS 58 ester with 70PGEP350B, homopolymer **861405-41-6P**, Acrylic acid-ethylene oxide-propylene oxide graft copolymer methacrylate homopolymer **861405-42-7P**, Aqualic AS 58 ester with 70PGEP350B, homopolymer sodium salt **861405-43-8P**, Acrylic acid-ethylene oxide-propylene oxide graft copolymer methacrylate homopolymer sodium salt
 RL: BUU (Biological use, unclassified); **IMF (Industrial manufacture)**; RCT (Reactant); TEM (Technical or engineered material use); BIOL (Biological study); **PREP (Preparation)**; RACT (Reactant or reagent); USES (Uses)
 (crosslinked; highly sensitive photopolymer compns. for preparation of hydrogels with good affinity to various compds.)

IT 106797-53-9, Irgacure 2959
 RL: BUU (Biological use, unclassified); CAT (Catalyst use); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
 (photopolymn. initiators; highly sensitive photopolymer compns. for preparation of hydrogels with good affinity to various compds.)

L26 ANSWER 4 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:1035745 HCAPLUS

DOCUMENT NUMBER: 142:30002

TITLE: Curable resin composition for photoresist

INVENTOR(S): Taguchi, Hiromu

PATENT ASSIGNEE(S): Toa Gosei Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004339373	A	20041202	JP 2003-137876	20030515

PRIORITY APPLN. INFO.: JP 2003-137876 20030515

AB The composition is made of a maleimide- and epoxy-containing polymer. The composition provides an adhesive photoresist showing good adhesion to a substrate and good water and moisture resistance.

IT 800370-58-5P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (composition of maleimide- and epoxy-substituted polymer for adhesive photoresist)

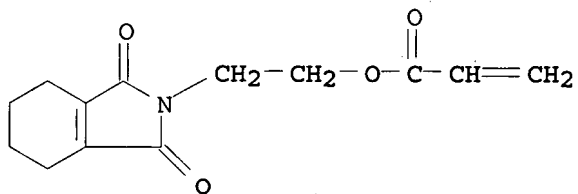
RN 800370-58-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 2-(1,3,4,5,6,7-hexahydro-1,3-dioxo-2H-isoindol-2-yl)ethyl 2-propenoate and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 125350-99-4

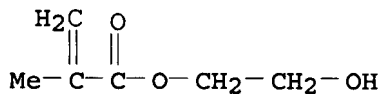
CMF C13 H15 N O4



CM 2

CRN 868-77-9

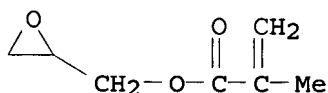
CMF C6 H10 O3



CM 3

CRN 106-91-2

CMF C7 H10 O3



IC ICM C08F220-36
ICS C08F220-32

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

IT 800370-58-5P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(composition of maleimide- and epoxy-substituted polymer for adhesive photoresist)

IT 71868-10-5, Irgacure 907 82799-44-8, DETX-S
RL: CAT (Catalyst use); USES (Uses)
(photopolymn. initiator; in composition of maleimide- and epoxy-substituted polymer for adhesive photoresist)

L26 ANSWER 5 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:934211 HCAPLUS

DOCUMENT NUMBER: 141:403508

TITLE: Producing method of photosensitive planographic printing plate

INVENTOR(S): Hirabayash, Kazuhiko

PATENT ASSIGNEE(S): Japan

SOURCE: U.S. Pat. Appl. Publ., 41 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004219459	A1	20041104	US 2004-828081	20040420
US 7056644	B2	20060606		
JP 2004325726	A	20041118	JP 2003-119577	20030424
PRIORITY APPLN. INFO.:			JP 2003-119577	A 20030424

OTHER SOURCE(S): MARPAT 141:403508

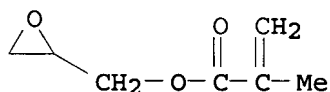
AB The object of the present invention is to provide a method for producing a photosensitive planog. printing plate having a high sensitivity and high printing durability and a low manufacturing cost. A method for producing a photosensitive planog. printing plate containing the steps of: (i) carrying out electrolysis to an aluminum support in an aqueous solution of hydrochloric acid or nitric acid so as to provide the aluminum support with a roughened surface; (ii) coating a photosensitive composition on the roughened surface of the aluminum support to obtain a photosensitive layer, the

photosensitive composition containing: (A) a monomer having an ethylenic double bond which is addition polymerizable; (B) a photoinitiator composition containing an iron arene complex compound; and (C) a polymer binder, (iii) drying the photosensitive layer.

IT 117576-50-8P, Ethyl methacrylate-glycidyl methacrylate-methacrylic acid-methyl methacrylate copolymer
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (producing method of photosensitive planog. printing plate)
 RN 117576-50-8 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, polymer with ethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2-oxiranylmethyl 2-methyl-2-propenoate (CA INDEX NAME)

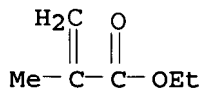
CM 1

CRN 106-91-2
 CMF C7 H10 O3



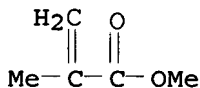
CM 2

CRN 97-63-2
 CMF C6 H10 O2



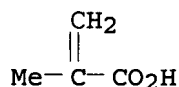
CM 3

CRN 80-62-6
 CMF C5 H8 O2



CM 4

CRN 79-41-4
 CMF C4 H6 O2



IC ICM G03C001-76

INCL 430300000

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 117576-50-8P, Ethyl methacrylate-glycidyl methacrylate-methacrylic acid-methyl methacrylate copolymer
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(producing method of photosensitive planog. printing plate)

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 6 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:330927 HCAPLUS

DOCUMENT NUMBER: 140:347490

TITLE: Photosensitive resin compositions with solubility regulation and formation method of double structure patterns

INVENTOR(S): Yang, Suk Yoon; No, Su Kwan; Kim, Gil Rai; Park, Chan Suk; Park, Choon Ho

PATENT ASSIGNEE(S): Samsung Electronics Co., Ltd., S. Korea; Toshin Semichem

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2004126600	A	20040422	JP 2003-347289	20031006
KR 2004031137	A	20040413	KR 2002-60500	20021004
US 2004115558	A1	20040617	US 2003-675455	20030930
CN 1519592	A	20040811	CN 2003-10124745	20031004
PRIORITY APPLN. INFO.:			KR 2002-60500	A 20021004

AB Title compns. for color filters comprise (A) **aqueous** alkali-soluble binders 5-30, (B) crosslinkable monomers having ≥ 2 ethylenic double bonds 5-30, (C) ≥ 1 **photoinitiator** selected from acetophenone type compds.,

xanthone type compds., benzoin type compds., and imidazole type compds. 1-5, (D) ≥ 1 under part crosslinker selected from silane type polymers and ethylenic monomers having ≥ 1 epoxy group or their oligomers 0.1-2, and (E) solvents 20-80 parts. Thus, a composition comprising styrene-methacrylic acid-Bu methacrylate copolymer 20, dipentaerythritol hexaacrylate 8, C.I. Pigment Red 254 20, C.I. Pigment Yellow 139 10, Irgacure 369 1, '4,4'-bisdiethylaminobenzophenone 1, 3-acryloyloxypropyltrimethoxysilane 0.1, propylene glycol Me ether acetate 28, and cyclohexanone 10 parts was applied on a glass plate, dried at 80° for 2 min, a photomask was placed thereon, irradiated, and developed with KOH, showing gamma value 1.3.

IT 681146-12-3P

RL: **IMF** (Industrial manufacture); **POF** (Polymer in formulation); **TEM** (Technical or engineered material use); **PREP** (Preparation); **USES** (Uses)
(photosensitive resin compns. with solubility regulation for color filters)

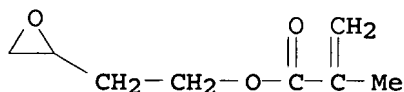
RN 681146-12-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-oxiranylethyl ester, polymer with 2-[[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 55750-22-6

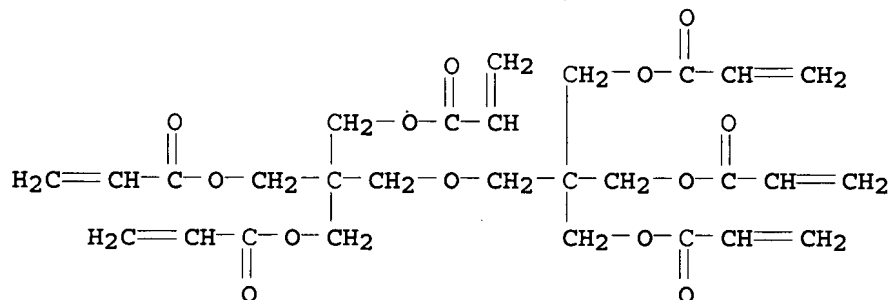
CMF C8 H12 O3



CM 2

CRN 29570-58-9

CMF C28 H34 O13



IC ICM G02B005-20

ICS C08F002-50; C08F291-06; G03F007-004; G03F007-26

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38
 IT 188722-79-4P 681146-11-2P **681146-12-3P**
 RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
 (photosensitive resin compns. with solubility regulation for color filters)
 IT 90-93-7, 4,4'-Bisdiethylaminobenzophenone 71868-10-5, Irgacure 907
 82799-44-8, 2,4-Diethylthioxanthone 119313-12-1, Irgacure 369
 RL: CAT (Catalyst use); USES (Uses)
 (polymerization **initiator**; **photosensitive resin compns.** with solubility regulation for color filters)

L26 ANSWER 7 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:68634 HCAPLUS

DOCUMENT NUMBER: 138:123971

TITLE: Photocurable compositions with rapid curability and low viscosity and optical fiber units using them

INVENTOR(S): Ii, Masahiro; Oshio, Atsushi; Saito, Osamu

PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2003026738	A	20030129	JP 2001-210685	20010711
PRIORITY APPLN. INFO.: JP 2001-210685				20010711

AB Title compns. comprise (A) radically polymerizable oligomers containing 20-55% urethane acrylates with number-average mol. weight (Mn) 1700-3500 and 10-45% urethane acrylates with Mn 300-1500 and (B) radically polymerizable monomers containing 15-40% cyclic structure-containing bifunctional monomers having ≥ 2 ether bonds with mol. weight 300-800 and 5-30% monofunctional monomers giving homopolymers with glass transition temperature $\geq 50^\circ$. The optical fiber units have outermost layers obtained by curing the compns. Thus, a composition containing a urethane acrylate oligomer prepared from 2,4-TDI, polypropylene glycol, and 2-hydroxyethyl acrylate, a urethane acrylate oligomer prepared from 2,4-TDI, tripropylene glycol, 2-hydroxypropyl acrylate, and isobornyl acrylate, N-vinyl-2-pyrrolidone, bisphenol A-ethylene oxide adduct diacrylate, and a mixture of bis(2,6-dimethoxybenzoyl)-2,4,4-trimethylpentyl phosphine oxide and 1-hydroxycyclohexyl Ph ketone was applied on an acrylic sheet and irradiated with UV light to give a coating with good **water** resistance.

IT 490017-25-9P

RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
 (photocurable urethane acrylate compns. for **water**-resistant coatings of optical fiber units)

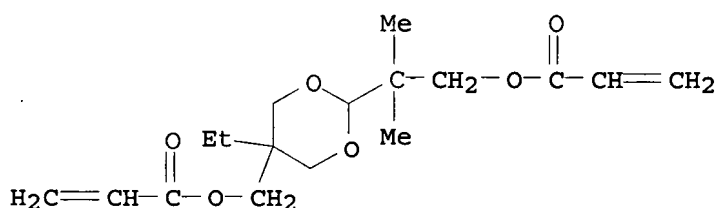
RN 490017-25-9 HCAPLUS

CN 2-Propenoic acid, [2-[1,1-dimethyl-2-[(1-oxo-2-propenyl)oxy]ethyl]-5-ethyl-1,3-dioxan-5-yl]methyl ester, polymer with 2,4-diisocyanato-1-methylbenzene, 1-ethenyl-2-pyrrolidinone, ethyloxirane, 2-hydroxyethyl 2-propenoate, 2-hydroxypropyl 2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 1,12-octadecanediol, tetrahydrofuran and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 87320-05-6

CMF C17 H26 O6

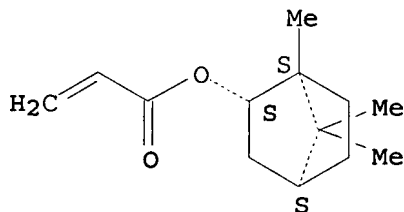


CM 2

CRN 5888-33-5

CMF C13 H20 O2

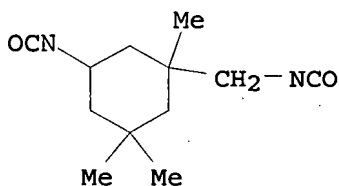
Relative stereochemistry.



CM 3

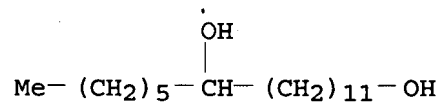
CRN 4098-71-9

CMF C12 H18 N2 O2



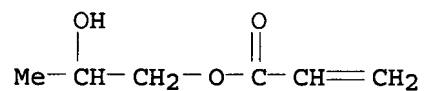
CM 4

CRN 2726-73-0
 CMF C18 H38 O2



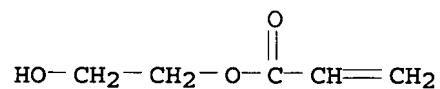
CM 5

CRN 999-61-1
 CMF C6 H10 O3



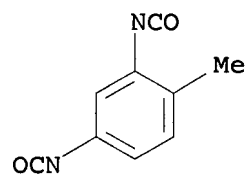
CM 6

CRN 818-61-1
 CMF C5 H8 O3



CM 7

CRN 584-84-9
 CMF C9 H6 N2 O2



CM 8

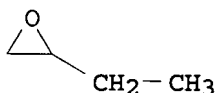
CRN 109-99-9
 CMF C4 H8 O



CM 9

CRN 106-88-7

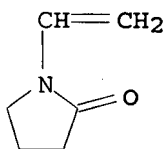
CMF C4 H8 O



CM 10

CRN 88-12-0

CMF C6 H9 N O



- IC ICM C08F290-06
ICS C03C025-24; C09D004-00; C09D171-00; C09D175-14; G02B006-44
- CC 42-7 (Coatings, Inks, and Related Products)
Section cross-reference(s): 73
- ST photocurable urethane acrylate coating optical fiber; **water** resistance urethane acrylate photocurable coating; viscosity urethane acrylate UV curable coating
- IT Polyurethanes, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-polyoxyalkylene-; photocurable urethane acrylate compns. for **water**-resistant coatings of optical fiber units)
- IT Optical fibers
(low-loss; photocurable urethane acrylate compns. for **water**-resistant coatings of optical fiber units)
- IT Coating materials
(photocurable; photocurable urethane acrylate compns. for **water**-resistant coatings of optical fiber units)
- IT Polyurethanes, uses
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(polyoxyalkylene-, acrylate-terminated; photocurable urethane acrylate compns. for **water**-resistant coatings of optical fiber units)
- IT Coating materials
(**water**-resistant; photocurable urethane acrylate compns. for **water**-resistant coatings of optical fiber)

- units)
- IT 818-61-1DP, 2-Hydroxyethyl acrylate, reaction products with isocyanate-containing polyurethanes 999-61-1DP, 2-Hydroxypropyl acrylate, reaction products with isocyanate-containing polyurethanes 9050-83-3DP, Polytetramethylene glycol-2,4-tolyene diisocyanate copolymer, reaction products with hydroxyethyl acrylate 37273-56-6DP, Polypropylene glycol-2,4-tolyene diisocyanate copolymer, reaction products with hydroxyethyl acrylate 63701-27-9DP, reaction products with hydroxypropyl acrylate 105527-18-2P 152219-70-ODP, reaction products with hydroxyethyl acrylate 153195-74-5DP, reaction products with hydroxypropyl acrylate
 RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (photocurable urethane acrylate compns. for water-resistant coatings of optical fiber units)
- IT 490017-23-7P 490017-24-8P 490017-25-9P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (photocurable urethane acrylate compns. for water-resistant coatings of optical fiber units)
- IT 88-12-0, N-Vinyl-2-pyrrolidone, uses 5888-33-5, Isobornyl acrylate 64401-02-1, Bisphenol A-ethylene oxide adduct diacrylate 87320-05-6
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
 (photocurable urethane acrylate compns. for water-resistant coatings of optical fiber units)
- IT 492-22-8, Thioxanthone 947-19-3, 1-Hydroxycyclohexyl phenyl ketone 24650-42-8, 2,2-Dimethoxy-2-phenylacetophenone 75980-60-8, 2,4,6-Trimethylbenzoyldiphenylphosphine oxide 104005-37-0, 3,6-Bis(2-methyl-2-morpholinopropionyl)-9-octylcarbazole 145052-34-2, Bis(2,6-dimethoxybenzoyl)-2,4,4-trimethylpentylphosphine oxide
 RL: CAT (Catalyst use); USES (Uses)
 (photopolymn. initiators;
 photocurable urethane acrylate compns. for water-resistant coatings of optical fiber units)

L26 ANSWER 8 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:748362 HCAPLUS

DOCUMENT NUMBER: 137:286439

TITLE: Water-soluble photosolder resist composition and cured solder resist coating for printed circuit board

INVENTOR(S): Yabuuchi, Naoya; Fujita, Minoru; Nanba, Osamu; Okajima, Keiichi

PATENT ASSIGNEE(S): Nippon Paint Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2002287355	A	20021003	JP 2001-92196	

200103
28

PRIORITY APPLN. INFO.:

JP 2001-92196

200103
28

AB The invention relates to a **water-soluble photosolder resist** composition comprising (A) an reactive amine salt of a resin comprised of isobornyl (meth)acrylate, (meth)acrylic acid, and glycidyl methacrylate, (B) an inorg. filler, and (C) a photocurable mixture comprised of a polyfunctional acrylic monomer, a cycloether-containing compound, and a **photopolymer initiator**. The photosolder resist composition may contain pigments. The photosolder resist composition is coated on a substrate, dried at 50-90°, exposed patternwisely to an actinic ray, developed with an alkaline developer, and baked at 140-170° to obtain the cured solder resist coating. The photosolder resist composition shows excellent photosensitivity, developability, solder heat-resistance, gold plating-resistance, thermal shock-resistance, and elec. insulating property and contains reduced amount of volatile organic compds.

IT **464891-34-7P**, Glycidyl methacrylate-isobornyl methacrylate-methacrylic acid-styrene-pentaerythritol tetraacrylate-trimethylolpropane trimethacrylate copolymer dimethylaminopropyl methacrylamide salt
 RL: **SPN (Synthetic preparation)**; **TEM (Technical or engineered material use)**; **PREP (Preparation)**; **USES (Uses)** (cured solder resist; **water-soluble photosolder resist** composition for manufacturing printed circuit board)

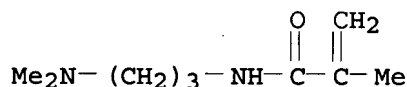
RN **464891-34-7 HCAPLUS**

CN 2-Propenoic acid, 2-methyl-, polymer with 2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, ethenylbenzene, 2-ethyl-2-[[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl bis(2-methyl-2-propenoate), oxiranylmethyl 2-methyl-2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate, compd. with N-[3-(dimethylamino)propyl]-2-methyl-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 5205-93-6

CMF C9 H18 N2 O



CM 2

CRN 464891-33-6

CMF (C18 H26 O6 . C17 H20 O8 . C14 H22 O2 . C8 H8 . C7 H10 O3 . C4 H6 O2)x

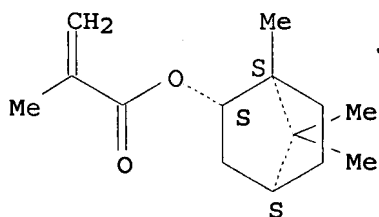
CCI PMS

CM 3

CRN 7534-94-3

CMF C14 H22 O2

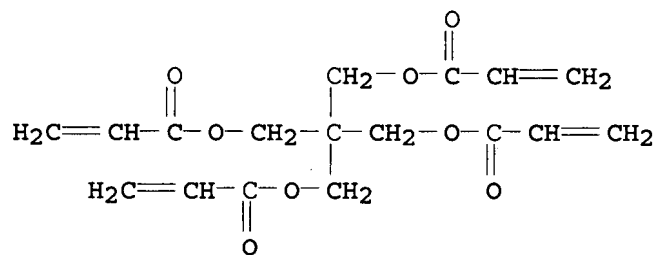
Relative stereochemistry.



CM 4

CRN 4986-89-4

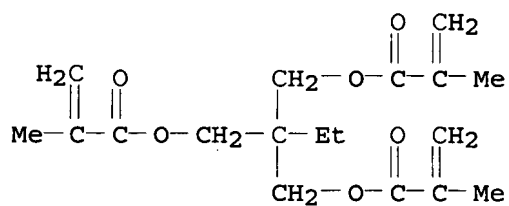
CMF C17 H20 O8



CM 5

CRN 3290-92-4

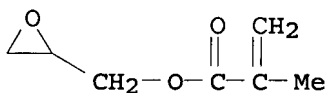
CMF C18 H26 O6



CM 6

CRN 106-91-2

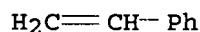
CMF C7 H10 O3



CM 7

CRN 100-42-5

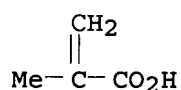
CMF C8 H8



CM 8

CRN 79-41-4

CMF C4 H6 O2



IC ICM G03F007-038
ICS C08G059-42; C08K003-00; C08K005-103; C08L063-00; G03F007-004

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 76

ST **water** soluble photosolder resist compn printed circuit board

IT Solder resists
(photoresists; **water**-soluble photosolder resist composition and cured solder resist coating for printed circuit board)

IT Photoresists
(solder; **water**-soluble photosolder resist composition and cured solder resist coating for printed circuit board)

IT Printed circuit boards
(**water**-soluble photosolder resist composition and cured solder resist coating for printed circuit board)

IT 7727-43-7, B 34
RL: TEM (Technical or engineered material use); USES (Uses)
(B 34; **water**-soluble photosolder resist composition for manufacturing printed circuit board)

IT 244772-00-7, EHPE 3150
RL: TEM (Technical or engineered material use); USES (Uses)
(EHPE 3150; **water**-soluble photosolder resist composition for manufacturing printed circuit board)

IT **464891-34-7P**, Glycidyl methacrylate-isobornyl methacrylate-methacrylic acid-styrene-pentaerythritol tetraacrylate-trimethylolpropane trimethacrylate copolymer dimethylaminopropyl methacrylamide salt **464891-35-8P**, Glycidyl methacrylate-isobornyl methacrylate-methacrylic acid-styrene-pentaerythritol tetraacrylate-trimethylolpropane trimethacrylate copolymer diethylaminoethyl acrylate salt
RL: **PNU (Preparation, unclassified)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(cured solder resist; **water**-soluble photosolder resist composition for manufacturing printed circuit board)

IT 71868-10-5, Irgacure 907 100752-97-4, Diethylthioxanthone
RL: CAT (Catalyst use); USES (Uses)
(**photopolymer. initiator**; **water**-soluble

photosolder resist composition for manufacturing printed circuit board)

- IT 464891-30-3P, Glycidyl methacrylate-isobornyl methacrylate-methacrylic acid-styrene copolymer 464891-31-4P
464891-32-5P, Glycidyl methacrylate-isobornyl methacrylate-methacrylic acid-styrene copolymer (diethylamino)ethyl acrylate salt
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(water-soluble photosolder resist composition for manufacturing printed circuit board)
- IT 147-14-8, Phthalocyanine blue 4986-89-4, Pentaerythritol tetraacrylate 15625-89-5, Trimethylolpropanetriacrylate
RL: TEM (Technical or engineered material use); USES (Uses)
(water-soluble photosolder resist composition for manufacturing printed circuit board)

L26 ANSWER 9 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:142810 HCAPLUS

DOCUMENT NUMBER: 136:205478

TITLE: Polymerizable composition, cured articles and X-ray detectable composite materials obtained from them

INVENTOR(S): Ori, Tatsuya; Saimi, Yasukazu; Asai, Masayuki

PATENT ASSIGNEE(S): Sun Medical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 40 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002014433	A1	20020221	WO 2001-JP6168	20010717
W: JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 2005123762	A1	20050609	US 2003-506090	20010717
PRIORITY APPLN. INFO.:				JP 2000-244679 A
				20000811
				WO 2001-JP6168 W
				20010717

- AB The invention relates to a polymerizable composition having good radiopacity and transparency and useful for filler of dental composite for improving visibility by X ray imaging, a cured article obtained from the composition; and a composite material containing particles obtained by pulverizing the cured article. The polymerizable composition comprises (A) an inorg. oxide having radiopacity and an average particle diameter of 100 nm or smaller, (B) a surface modifier, (C) a polymerizable compound, and (D) a polymerization initiator. The cured object

is obtained by polymerizing these ingredients. Thus, mixing 100 parts a dispersion containing zirconia (diameter 5-10 nm) 20, AcOH 15, and water 65% with MeOH 400 and γ -methacryloxypropyltrimethoxysilane 20 at room temperature for 48 , adding trimethylolpropane trimethacrylate 11.5, mixing, removing 250 parts MeOH solvent by evaporation in vacuo, replacing the MeOH loss with the same amount of i-PrOH, evaporating again to remove most of the solvent, and drying at 80° for 6 h gave a transparent polymerizable product (A) containing 30% zirconia. Compression molding a mixture of 100 parts the A and 0.3 parts Bz2O2 at 0.5 MPa and 120° for 10 min gave a molding with 560-nm light transmission 73.4% and Al-equivalent radiopacity 161%. Crushing the cured molding and fractionation gave a powder which was washed, dried, combined at 42 parts with 100 parts a photo-polymerizable composition containing a 15:25:60 mixture of triethylene glycol dimethacrylate, 1,3-bis(methacryloxyethoxy)benzene and 2,2-bis[4-(methacryloxyethoxy)phenyl]propane, 100, camphorquinone 0.3, 2-butoxyethyl p-(N,N-dimethylamino)benzoate 0.06 and 2,6-di-tert-butyl-p-cresol 0.084 parts, and 18 parts Aerosil R 972 (treated fumed silica) and irradiated to give a transparent composite with light transmission 4.0%, Al-equivalent radiopacity 128% and compression strength 434 MPa.

IT 400708-51-2P, 2,2-Bis[4-(methacryloxyethoxy)phenyl]propane-2-hydroxyethyl methacrylate-4-methacryloxyethyltrimellitic acid-4-methacryloxyethyltrimellitic anhydride-triethylene glycol dimethacrylate-Ripoxy VR 90 copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (photocurable cement; polymerizable composition, cured articles and x-ray detectable composite materials obtained from them)

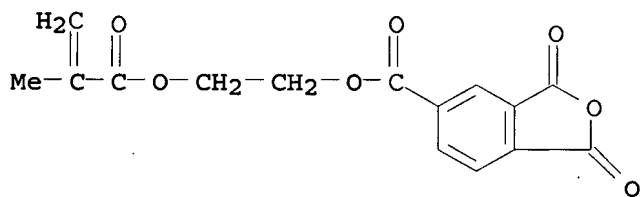
RN 400708-51-2 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, 4-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester, polymer with 1,2-ethanediylbis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate), 2-hydroxyethyl 2-methyl-2-propenoate, (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bis(2-methyl-2-propenoate), 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane] homopolymer di-2-propenoate and 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl 1,3-dihydro-1,3-dioxo-5-isobenzofurancarboxylate (9CI) (CA INDEX NAME)

CM 1

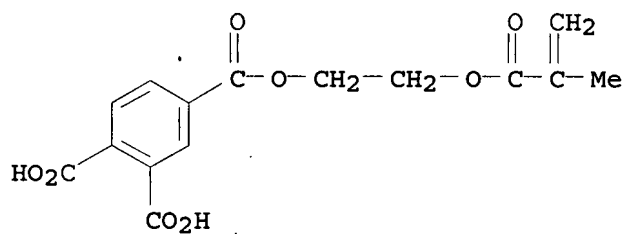
CRN 70293-55-9

CMF C15 H12 O7



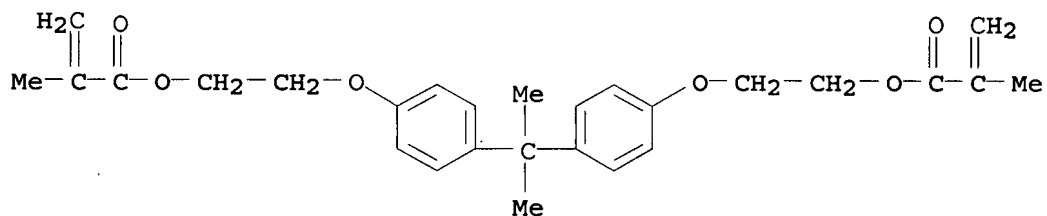
CM 2

CRN 68183-31-3
CMF C15 H14 O8



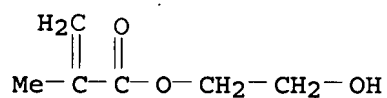
CM 3

CRN 24448-20-2
CMF C27 H32 O6



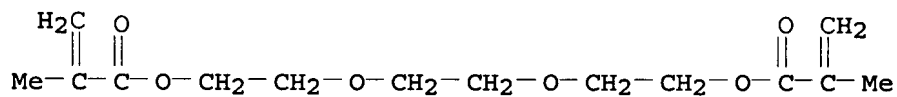
CM 4

CRN 868-77-9
CMF C6 H10 O3



CM 5

CRN 109-16-0
CMF C14 H22 O6



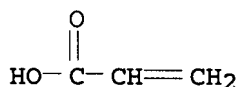
CM 6

CRN 55127-80-5
CMF (C21 H24 O4)x . 2 C3 H4 O2

CM 7

CRN 79-10-7

CMF C3 H4 O2



CM 8

CRN 25085-99-8

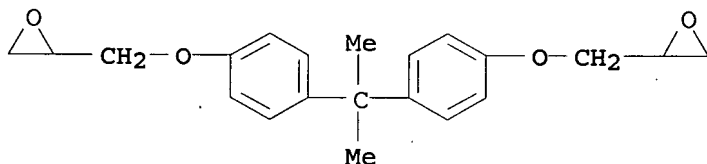
CMF (C21 H24 O4)x

CCI PMS

CM 9

CRN 1675-54-3

CMF C21 H24 O4



IC ICM C08L101-00

ICS C08L033-04; C08K003-22; C08F002-44; C08F020-10; C08F290-06;
C08G059-17; A61K006-08

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 37

IT 400628-13-9P, 1,3-Bis(methacryloxyethoxy)benzene; 2,2-bis[4-(methacryloxyethoxy)phenyl]propane; triethylene glycol dimethacrylate copolymer 400708-51-2P, 2,2-Bis[4-(methacryloxyethoxy)phenyl]propane-2-hydroxyethyl methacrylate-4-methacryloxyethyltrimellitic acid-4-methacryloxyethyltrimellitic anhydride-triethylene glycol dimethacrylate-Ripoxy VR 90 copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(photocurable cement; polymerizable composition, cured articles and x-ray detectable composite materials obtained from them)

IT 10373-78-1, Camphorquinone

RL: CAT (Catalyst use); USES (Uses)

(photoinitiators; polymerizable composition, cured articles and x-ray detectable composite materials obtained from them)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 10 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN

MHuang REM4B31 571-272-3952

05/03/2007

ACCESSION NUMBER: 2000:881239 HCAPLUS
 DOCUMENT NUMBER: 134:42965
 TITLE: **Aqueous** emulsion type photosensitive
 resin compositions giving good water-
 and solvent-resistant cured films useful for
 manufacture of screen printing plates and as
 photoresist inks for manufacture of printed
 circuit boards
 INVENTOR(S): Morigaki, Toshio; Matsumoto, Masatami
 PATENT ASSIGNEE(S): Goo Chemical Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 56 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 2000075235	A1	20001214	WO 2000-JP3698	200006 07
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2000051063	A	20001228	AU 2000-51063	200006 07
EP 1213327	A1	20020612	EP 2000-935573	200006 07
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
TW 573220	B	20040121	TW 2000-89111203	200006 07
US 6808865	B1	20041026	US 2001-926561	200111 19
PRIORITY APPLN. INFO.:				A
JP 1999-158890				199906 07
JP 1999-158920				A 199906 07
JP 1999-163097				A 199906 09
WO 2000-JP3698				W 200006 07

AB Title compns. comprise (A) an emulsion of a photosensitive **water-insol.** polymer, the emulsion being obtained by reacting (i) an **aqueous** polymer emulsion which contains as the main component a **water-insol.** polymer and in which at least one of the polymer(s) contained in the emulsion contains hydroxyl groups with (ii) an N-alkylol(meth)acrylamide; (B) a compound having a photoactive ethylenically unsatd. group; and (C) a **photopolymer. initiator**. Thus, Me methacrylate, Bu acrylate, hydroxyethyl acrylate were polymerized in the presence of PVA 224, dodecylmercaptan, and ammonium persulfate to give a hydroxy-containing acrylic polymer **aqueous** emulsion, N-methylolacrylamide was added and reacted to give a 30%-solid photosensitive **water-insol.** polymer emulsion. A photoetching resist ink comprising the resulting emulsion 80, methacrylic acid-Me methacrylate copolymer binder 400, Aronix M 101 60, Aronix M 309 60, Irgacure 907 30, Kayacure DETX 5 parts showed fast-drying and good photosensitivity, developability, film hardness, adhesion, etching solution resistance, and peeling resistance.

IT 163658-82-0P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(binder; **aqueous** emulsion photosensitive resin compns. giving good **water-** and solvent-resistant cured films)

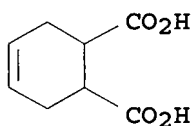
RN 163658-82-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with methyl 2-methyl-2-propenoate and oxiranylmethyl 2-methyl-2-propenoate, 4-cyclohexene-1,2-dicarboxylate 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 88-98-2

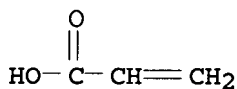
CMF C8 H10 O4



CM 2

CRN 79-10-7

CMF C3 H4 O2

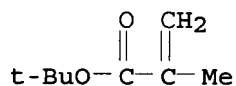


CM 3

CRN 154707-73-0
 CMF (C8 H14 O2 . C7 H10 O3 . C5 H8 O2)x
 CCI PMS

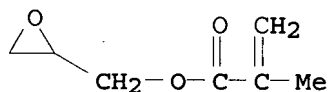
CM 4

CRN 585-07-9
 CMF C8 H14 O2



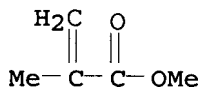
CM 5

CRN 106-91-2
 CMF C7 H10 O3



CM 6

CRN 80-62-6
 CMF C5 H8 O2



IC ICM C08L101-06
 ICS G03F007-032; G03F007-027
 CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): 74
 ST photosensitive **aq** emulsion photoresist ink; screen
 printing plate photosensitive **aq** emulsion; printed circuit
 board **aq** emulsion photoresist
 IT Polyesters, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (acrylates; **aqueous** emulsion photosensitive resin compns.
 giving good **water**- and solvent-resistant cured films)
 IT Binders
 Photoimaging materials
 (**aqueous** emulsion photosensitive resin compns. giving good
water- and solvent-resistant cured films)
 IT Epoxy resins, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (**aqueous** emulsion photosensitive resin compns. giving good
water- and solvent-resistant cured films)
 IT Photoresists
 (**aqueous** emulsion photosensitive resin compns. giving good

- water-** and solvent-resistant cured films for)
- IT Printed circuit boards
(**aqueous** emulsion photosensitive resin compns. giving good **water-** and solvent-resistant cured films for preparation of)
- IT Epoxy resins, uses
RL: MOA (Modifier or additive use); USES (Uses)
(phenolic, novolak, cresol; **aqueous** emulsion photosensitive resin compns. giving good **water-** and solvent-resistant cured films)
- IT Polymerization catalysts
(photopolymn.; **aqueous** emulsion photosensitive resin compns. giving good **water-** and solvent-resistant cured films)
- IT Solder resists
(photoresists; **aqueous** emulsion photosensitive resin compns. giving good **water-** and solvent-resistant cured films for)
- IT Colloids
(protective; **aqueous** emulsion photosensitive resin compns. giving good **water-** and solvent-resistant cured films)
- IT Printing plates
(screen; **aqueous** emulsion photosensitive resin compns. giving good **water-** and solvent-resistant cured films for preparation of)
- IT Photoresists
(solder; **aqueous** emulsion photosensitive resin compns. giving good **water-** and solvent-resistant cured films for)
- IT 80-62-6DP, Methyl methacrylate, polymers with (meth)acrylates, reaction products with methylolacrylamide 97-86-9DP, Isobutyl methacrylate, polymers with (meth)acrylates, reaction products with methylolacrylamide 141-32-2DP, Butyl acrylate, polymers with (meth)acrylates, reaction products with methylolacrylamide 924-42-5DP, N-Methylolacrylamide, reaction products with hydroxy-containing acrylic polymers or PVA 9002-89-5DP, reaction products with methylolacrylamide 25951-39-7DP, Butyl acrylate-2-hydroxyethyl methacrylate-methyl methacrylate copolymer, reaction products with methylolacrylamide 921764-31-0DP, Gohsenol GH 17, reaction products with methylolacrylamide
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**aqueous** emulsion photosensitive resin compns. giving good **water-** and solvent-resistant cured films)
- IT 3290-92-4, Acryester TMP 3524-68-3, Pentaerythritol triacrylate 15625-89-5, Aronix M 309 29570-58-9, Dipentaerythritol hexaacrylate 48145-04-6, Light Acrylate PO-A 56641-05-5, Aronix M 101 57043-35-3, Light Acrylate HOA-HH 61287-25-0, Aronix M 8030 87912-85-4, Epiclon N 680 250225-53-7, YH 4000
RL: MOA (Modifier or additive use); USES (Uses)
(**aqueous** emulsion photosensitive resin compns. giving good **water-** and solvent-resistant cured films)
- IT 25086-15-1P, Methacrylic acid-methyl methacrylate copolymer 114921-38-9P, Methacrylic acid-methyl methacrylate copolymer, ester with glycidyl methacrylate 163658-82-0P 249603-10-9P 251105-88-1P, SMA 1000A, ester with 2-hydroxyethyl acrylate
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(binder; **aqueous** emulsion photosensitive resin compns.

giving good **water**- and solvent-resistant cured films)

IT 71868-10-5, Irgacure 907 82799-44-8, Kayacure DETX 95971-30-5,
2,4-Diisopropylthioxanthone
RL: CAT (Catalyst use); USES (Uses)
(**photopolymn. initiator**; **aqueous**
emulsion **photosensitive resin compns.** giving
good **water**- and solvent-resistant cured films)

IT 9003-20-7D, Poly(vinyl acetate), saponified 130960-31-5, PVA 217
143180-25-0, PVA 224
RL: MOA (Modifier or additive use); USES (Uses)
(protective colloid; **aqueous** emulsion **photosensitive resin**
compns. giving good **water**- and solvent-resistant cured
films)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN
THE RE FORMAT

L26 ANSWER 11 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:784257 HCAPLUS

DOCUMENT NUMBER: 128:76406

TITLE: Pattern-forming light-sensitive resin
compositions, films, and cured products thereof
with good adhesion

INVENTOR(S): Mori, Satoshi; Yokoshima, Minoru

PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 09316148	A	19971209	JP 1996-159278	199605 31
PRIORITY APPLN. INFO.: JP 1996-159278				199605 31

AB The compns., showing excellent developability, comprise (A) photopolymerizable resins and/or non-reactive resins, (B) dilutants, (C) **photopolymn. initiators**, (D) UV absorbers and/or (E) colorants, and (F) metal powders, metal oxides, and/or glass. Films and cured products of above compns. are also claimed. Resistors, conductors, phosphors, and separators prepared by firing of the cured products are also claimed. Thus, 310 parts Blemmer CP 50M (epoxy resin) was treated with 72 parts acrylic acid at 95° in propylene glycol monomethyl ether acetate in the presence of Ph3P and methylhydroquinone, and further treated with succinic anhydride at 95° to give a 50%-solid unsatd. resin, 20.0 parts of which was blended with Kayarad THE 330 (ethoxylated trimethylolpropane triacrylate) 5.0, Kayacure DETX-S (2,4-diethylthioxanthone) 0.25, Kayacure EPA (Et p-dimethylaminobenzoate) 0.25, low-m.p. glass powders 30, and Ruva 93 [2-(2'-hydroxy-5'-methacryloxyethylphenyl)-2H-benzothiazole] 0.01 part to give the claimed composition. Then, the composition was applied on a glass plate, pre-baked, exposed with UV through a mask, and developed with an **aqueous** developer to

give a pattern, which was fired at 500° to give a separator pattern showing excellent adhesion to glass plate.

IT 199744-83-7P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photosensitive resin compns. with good developability for pattern fabrication)

RN 199744-83-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with oxiranylmethyl 2-methyl-2-propenoate, 2-propenoate, polymer with dihydro-2,5-furandione and α -hydro- ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

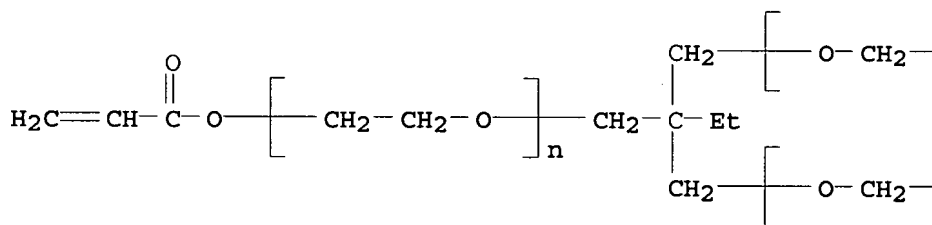
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CRN 28961-43-5

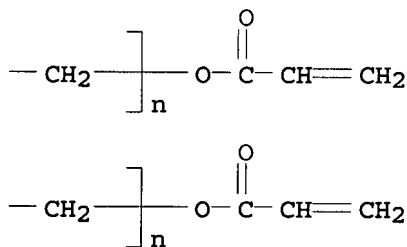
CMF (C2 H4 O)_n (C2 H4 O)_n (C2 H4 O)_n C15 H20 O6

CCI PMS

PAGE 1-A



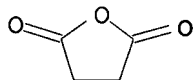
PAGE 1-B



CM 2

CRN 108-30-5

CMF C4 H4 O3



CM 3

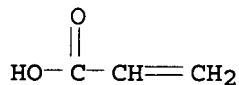
CRN 99638-49-0

CMF (C7 H10 O3 . C5 H8 O2)x . x C3 H4 O2

CM 4

CRN 79-10-7

CMF C3 H4 O2



CM 5

CRN 26141-88-8

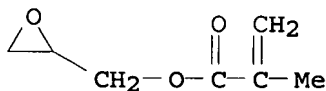
CMF (C7 H10 O3 . C5 H8 O2)x

CCI PMS

CM 6

CRN 106-91-2

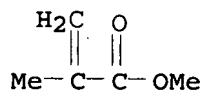
CMF C7 H10 O3



CM 7

CRN 80-62-6

CMF C5 H8 O2



IC ICM C08F299-00

ICS C08F290-00; C08J005-18; G03F007-004; G03F007-027; H01J011-02

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 73, 76

IT 10287-53-3, Kayacure EPA 24650-42-8, IRG 651 82799-44-8,
Kayacure DETX-S

RL: CAT (Catalyst use); USES (Uses)

(photopolymn. initiators;

photosensitive resin compns. with good
developability for pattern fabrication)

IT 199679-55-5P 199744-83-7P

RL: IMF (Industrial manufacture); POF (Polymer in
formulation); PRP (Properties); TEM (Technical or engineered)

material use); **PREP (Preparation)**; **USES (Uses)**
(photosensitive resin compns. with good developability for
pattern fabrication)

L26 ANSWER 12 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:230508 HCAPLUS

DOCUMENT NUMBER: 126:218645

TITLE: **Water-developable photosensitive resin composition, its preparation, and flexographic printing original plate**

INVENTOR(S): Nakano, Katsuya

PATENT ASSIGNEE(S): Asahi Chemical Ind, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 09026666	A	19970128	JP 1995-197180	199507 11
PRIORITY APPLN. INFO.: JP 1995-197180				199507 11

AB The title resin composition contains (a) a reactive microgel, (b) a compound having ≥ 1 α, β -ethylenic unsatd. double bond, (c) a thermoplastic polymer, and (d) an aromatic ketone as a **photopolymer. initiator**. The microgel may be prepared by reaction of fine particles and a compound having an epoxy group reactive with tertiary ammonium salt and ≥ 1 α, β -unsatd. ethylenic compds. The fine particle is obtained by emulsion or suspension polymerization of compds. having ≥ 1 α, β -ethylenic unsatd. double bond in the presence of a tertiary ammonium salt-containing compound. Manufacture process for the microgel is also claimed. The flexog. printing original plate comprises a support coated with a photosensitive layer made of the composition. The composition shows improved image-forming properties and provides sharp relief images and flexog. printing plates with good **water-developability** as the elasticity is improved by using the aromatic ketone initiator.

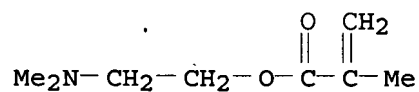
IT **188051-19-6DP**, 2-Dimethylaminoethyl methacrylate-lauryl methacrylate-glycidyl methacrylate-2-ethylhexyl acrylate-ethylene glycol dimethacrylate copolymer, reaction products with
RL: **IMF (Industrial manufacture)**; RCT (Reactant);
PREP (Preparation); RACT (Reactant or reagent)
(microgel; dephotopolymerizable composition of reactive microgel containing aromatic ketone initiator with improved elasticity for flexog. printing plate)

RN 188051-19-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with 2-(dimethylamino)ethyl 2-methyl-2-propenoate, dodecyl 2-methyl-2-propenoate, 2-ethylhexyl 2-methyl-2-propenoate and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

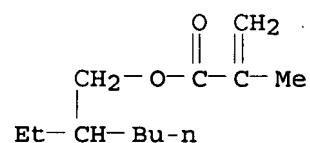
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CRN 2867-47-2
CMF C8 H15 N O2



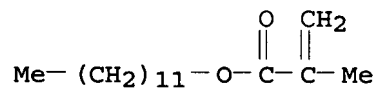
CM 2

CRN 688-84-6
CMF C12 H22 O2



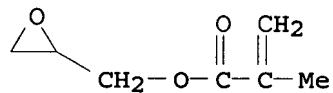
CM 3

CRN 142-90-5
CMF C16 H30 O2



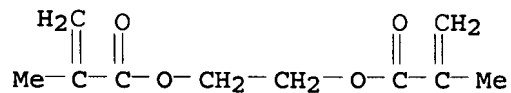
CM 4

CRN 106-91-2
CMF C7 H10 O3



CM 5

CRN 97-90-5
CMF C10 H14 O4



IC ICM G03F007-031
 ICS G03F007-00; G03F007-004; G03F007-027; G03F007-033
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 35
 ST **water** developable photosensitive resin; flexog printing plate **water** developable; reactive microgel **water** developable compn; **photopolymer initiator** arom ketone reactive microgel
 IT 119-61-9, Benzophenone, uses
 RL: CAT (Catalyst use); USES (Uses)
 (initiator; photopolymerizable compn
 of reactive microgel containing aromatic ketone initiator with improved elasticity for flexog. printing plate)
 IT 188051-19-6DP, 2-Dimethylaminoethyl methacrylate-lauryl methacrylate-glycidyl methacrylate-2-ethylhexyl acrylate-ethylene glycol dimethacrylate copolymer, reaction products with
 RL: IMF (Industrial manufacture); RCT (Reactant);
 PREP (Preparation); RACT (Reactant or reagent)
 (microgel; dephotopolymerizable composition of reactive microgel containing aromatic ketone initiator with improved elasticity for flexog. printing plate)

L26 ANSWER 13 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:204639 HCAPLUS

DOCUMENT NUMBER: 126:186932

TITLE: Energy ray-curable compositions and their cured products with excellent dimensional precision

INVENTOR(S): Abe, Tetsuya; Yoshioka, Ritsuko; Yokoshima, Minoru

PATENT ASSIGNEE(S): Nippon Kayaku Kk, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 09012615	A	19970114	JP 1995-185087	19950629
				19950629

PRIORITY APPLN. INFO.: JP 1995-185087

OTHER SOURCE(S): MARPAT 126:186932

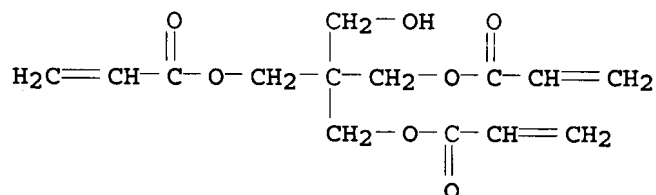
AB The compns., suited for optical molding, contain ethylenically unsatd. compds., cationically-polymerizable compds., and sulfonium **photopolymer initiators** containing thioxanthone structure. Cured products of above compns. are also claimed. Thus, 38.4 parts 2,4-di-Et thioxanthone was reacted with 23.8 parts 4,4'-difluorodiphenyl sulfoxide at 25° and further reacted with 619.9 parts NaSbF₆ aqueous solution (solid content 37.1 parts) to give a precipitate, 3 parts of which was blended with dipentaerythritol hexaacrylate 15, 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane carboxylate 55, and bisphenol A divinyl ether 30 parts to give a composition. Then, the composition was injected in a mold and

IT 187619-13-2P, 3,4-Epoxy cyclohexylmethyl-3,4-epoxycyclohexane
carboxylate-bisphenol a diglycidyl ether-pentaerythritol
triacylate-bisphenol a-epichlorohydrin acrylate copolymer

RN 187619-13-2 HCAPLUS

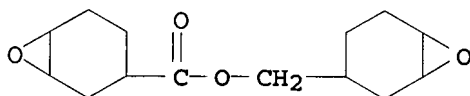
CM 1

CMF C14 H18 O7



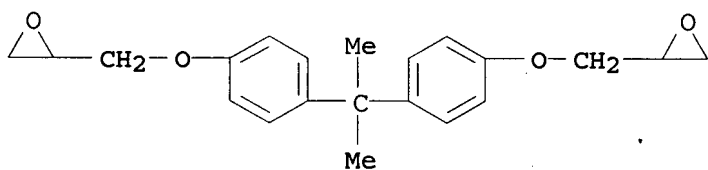
CM 2

CMF C14 H20 O4



CM 3

CMF C21 H24 O4



CM 4

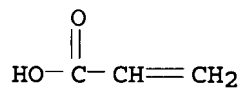
CRN 55818-57-0

CMF (C15 H16 O2 . C3 H5 Cl O)x . x C3 H4 O2

CM 5

CRN 79-10-7

CMF C3 H4 O2



CM 6

CRN 25068-38-6

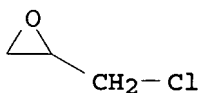
CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

CM 7

CRN 106-89-8

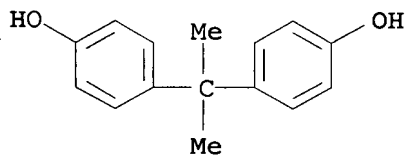
CMF C3 H5 Cl O



CM 8

CRN 80-05-7

CMF C15 H16 O2



IC ICM C08F002-50

CC 37-6 (Plastics Manufacture and Processing)

- Section cross-reference(s): 35, 38
- IT Epoxy resins, uses
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
 (energy ray-curable **compns.** containing sulfonium **photopolymn. initiators** for optical moldings)
- IT Polymerization catalysts
 (photopolymn.; sulfonium **photopolymn. initiators** containing thioxanthone structure for optical molding compns.)
- IT Sulfonium compounds
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
 (sulfonium **photopolymn. initiators** containing thioxanthone structure for optical molding compns.)
- IT 125321-32-6P, Dipentaerythritol hexaacrylate-3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane carboxylate-bisphenol a divinyl ether copolymer 125321-33-7P, Dipentaerythritol hexaacrylate-3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane carboxylate-trimethylolpropane triacrylate-triethylene glycol divinyl ether copolymer 187619-13-2P, 3,4-Epoxycyclohexylmethyl-3,4-epoxycyclohexane carboxylate-bisphenol a diglycidyl ether-pentaerythritol triacrylate-bisphenol a-epichlorohydrin acrylate copolymer
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (cured product; energy ray-curable **compns.** containing sulfonium **photopolymn. initiators** for optical moldings)
- IT 765-12-8, Triethylene glycol divinyl ether 1675-54-3 2386-87-0 3524-68-3 3754-60-7, Bisphenol A divinyl ether 15625-89-5, Trimethylolpropane triacrylate 29570-58-9, Dipentaerythritol hexaacrylate 55818-57-0, Bisphenol A-epichlorohydrin copolymer acrylate
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
 (energy ray-curable **compns.** containing sulfonium **photopolymn. initiators** for optical moldings)
- IT 107-21-1, 1,2-Ethanediol, reactions 395-25-5, 4,4'-Difluorodiphenyl sulfoxide 945-51-7, Diphenyl sulfoxide 1774-35-2, 4,4'-Dimethyldiphenyl sulfoxide 5495-84-1, 2-Isopropylthioxanthone 16925-25-0, Sodium hexafluoroantimonate 21324-39-0, Sodium hexafluorophosphate 82799-44-8, 2,4-Diethylthioxanthone 142770-42-1, 1-Chloro-4-propoxythioxanthone
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of sulfonium **photopolymn. initiators** containing thioxanthone structure for optical molding compns.)
- IT 181144-47-8P
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
 (sulfonium **photopolymn. initiators** containing thioxanthone structure for optical molding compns.)
- IT 181144-49-0P 181144-51-4P 181144-53-6P
 RL: CAT (Catalyst use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (sulfonium **photopolymn. initiators** containing thioxanthone structure for optical molding compns.)

ACCESSION NUMBER: 1996:387748 HCAPLUS
 DOCUMENT NUMBER: 125:71898
 TITLE: Resin compositions, permanent resist resin compositions, and their hardened products
 INVENTOR(S): Hozumi, Takeshi
 PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08062840	A	19960308	JP 1994-198793	19940823
JP 3434584	B2	20030811	JP 1994-198793	19940823

PRIORITY APPLN. INFO.:
 19940823

AB The title resin compns. comprise (a) a polyfunctional epoxy resin with epoxy equivalent 120-500, (b) an alkylphenol novolak-type light/heat-hardening agent having ≥ 1 (meth)acryloyl group, (c) an epoxy (meth)acrylate compound, (d) a diluent comprising photopolymerizable and heat-reactive monomers, and (e) a **photopolymer. initiator**. The permanent resist resin compns. for printed circuit boards comprising the above compns. and the hardened products of these resin compns. are also claimed. The resin compns. provide printed circuit boards showing high resolution, developability with alkali **aqueous** solns., and resistance to organic solvents, nonelectrolytic plating, and heat. Thus, a permanent resist resin composition comprised Epikote 828 (I; epoxy resin; epoxy equivalent 190), a reaction product of cresol-HCHO novolak resin with glycidyl methacrylate, a reaction product of I with acrylic acid and succinic anhydride, glycidyl methacrylate, and Irgacure 651 (**photopolymer. initiator**).

IT 82600-83-7P

RL: **PNU (Preparation, unclassified)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
 (permanent resist composition for printed circuit board)

RN 82600-83-7 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, hexanedioate 2-propenoate (9CI) (CA INDEX NAME)

CM 1

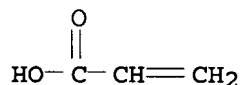
CRN 124-04-9

CMF C6 H10 O4

HO₂C-(CH₂)₄-CO₂H

CM 2

CRN 79-10-7
CMF C3 H4 O2

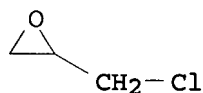


CM 3

CRN 25068-38-6
CMF (C15 H16 O2 . C3 H5 Cl O)x
CCI PMS

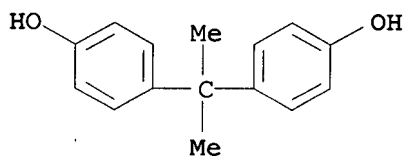
CM 4

CRN 106-89-8
CMF C3 H5 Cl O



CM 5

CRN 80-05-7
CMF C15 H16 O2



IC ICM G03F007-032
ICS C08G059-40; G03F007-027; H01L021-027; H05K003-06; H05K003-18;
H05K003-28
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 76
ST resin compn epoxy resin; alkylphenol novolak hardener resin compn;
photopolymn initiator resin compn;
diluent photopolymerizable monomer resin compn; permanent resist
resin compn
IT 9016-83-5DP, Cresol-formaldehyde copolymer, reaction products with
glycidyl methacrylate 82600-83-7P 82600-86-0P
RL: **PNU (Preparation, unclassified)**; TEM (Technical or
engineered material use); **PREP (Preparation)**; **USES (Uses)**
(permanent resist composition for printed circuit board)

L26 ANSWER 15 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1995:128105 HCAPLUS

DOCUMENT NUMBER: 122:108844
 TITLE: Heat-resistant radiation-curable unsaturated epoxy resin compositions
 INVENTOR(S): Sano, Kimyasu; Shimada, Atsufumi; Endo, Masayuki; Betsusho, Nobuo
 PATENT ASSIGNEE(S): Japan Synthetic Rubber Co Ltd, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06192389	A	19940712	JP 1992-315407	19921125
JP 3151975	B2	20010403	JP 1992-315407	19921125

PRIORITY APPLN. INFO.: JP 1992-315407

AB The title compns., useful for protective coatings for optical devices, comprise [A] copolymers of unsatd. carboxylic acids and/or unsatd. carboxylic acid anhydrides, epoxy-containing radically polymerizable compds., monoolefin-based unsatd. compds., and conjugated diolefin-based unsatd. compds., [B] ethylenically unsatd. double bond-containing polymerizable compds., [C] compds. containing ≥ 2 epoxy groups, and [D] **photopolymn. initiators**. Thus, styrene 22.5, methacrylic acid 45.0, dicyclopentanyl methacrylate 45.0, glycidyl methacrylate 90.0, and 1,3-butadiene 22.5 g were polymerized in diethylene glycol di-Me ether (I) in the presence of AIBN, then diluted with I to solid concentration 25%, which was diluted with I, mixed with Irgacure 369, Aronix M 400, γ -glycidoxypropyltrimethoxysilane, and Epikote 828, then filtered to give a coating solution, which was spread on a glass substrate, baked at 80°, then irradiated with UV by using a pattern mask under 0 atmospheric, then developed with **aqueous** Me4NOH to give a patterned substrate showing good heat resistance.

IT 160770-13-8P

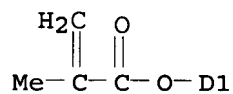
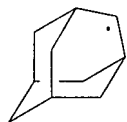
RL: **PNU (Preparation, unclassified)**; POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
 (radiation-curable acrylate epoxy resin coatings containing **photopolymn. initiators** for protective coatings for optical devices)

RN 160770-13-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 1,3-butadiene, (chloromethyl)oxirane, ethenylbenzene, 4,4'-(1-methylethylidene)bis[phenol], oxiranylmethyl 2-methyl-2-propenoate, 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and tricyclo[3.3.1.1^{3,7}]decyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

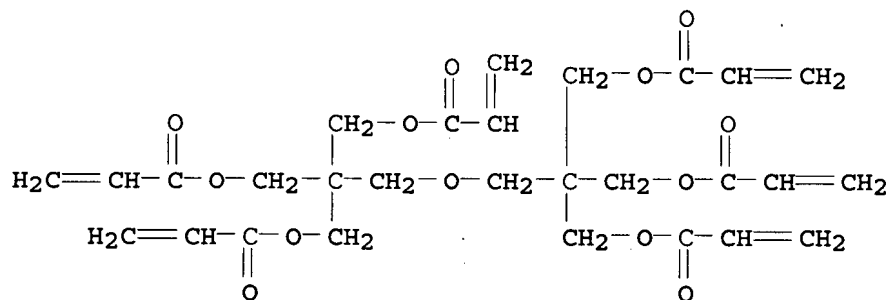
CM 1

CRN 71097-48-8
 CMF C14 H20 O2
 CCI IDS



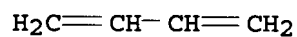
CM 2

CRN 29570-58-9
 CMF C28 H34 O13



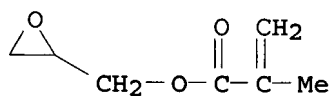
CM 3

CRN 106-99-0
 CMF C4 H6

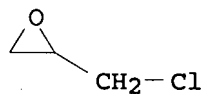


CM 4

CRN 106-91-2
 CMF C7 H10 O3



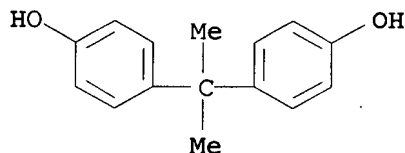
CM 5

CRN 106-89-8
CMF C3 H5 Cl O

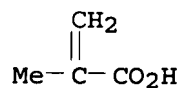
CM 6

CRN 100-42-5
CMF C8 H8

CM 7

CRN 80-05-7
CMF C15 H16 O2

CM 8

CRN 79-41-4
CMF C4 H6 O2

IC ICM C08G059-20
ICS C08G059-40; C08G059-42; C08L063-00
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 73
IT Light-sensitive materials
Optical materials
(acrylate epoxy resin photocurable compns. containing
photopolymn. initiators for protective coatings
for optical devices)
IT Epoxy resins, uses
RL: PNU (Preparation, unclassified); POF (Polymer in formulation);
PRP (Properties); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)

- (acrylates, radiation-curable acrylate epoxy resin coatings containing **photopolymn. initiators** for protective coatings for optical devices)
- IT Coating materials
(heat-resistant, radiation-curable, transparent; acrylate epoxy resin photocurable **compns.** containing **photopolymn. initiators** for protective coatings for optical devices)
- IT Polymerization catalysts
(photochem., radiation-curable acrylate epoxy resin coatings containing **photopolymn. initiators** for protective coatings for optical devices)
- IT 32760-80-8, Irgacure 261 71868-10-5, Irgacure 907 119313-12-1, Irgacure 369
RL: CAT (Catalyst use); USES (Uses)
(**photopolymn. initiators**; radiation-curable acrylate epoxy resin coatings containing **photopolymn. initiators** for protective coatings for optical devices)
- IT 6542-67-2
RL: CAT (Catalyst use); PRP (Properties); USES (Uses)
(radiation-curable acrylate epoxy resin coatings containing **photopolymn. initiators** for protective coatings for optical devices)
- IT 160770-13-8P 160770-14-9P 160770-15-0P
160770-16-1P 160770-17-2P 160770-18-3P
RL: PNU (Preparation, unclassified); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radiation-curable acrylate epoxy resin coatings containing **photopolymn. initiators** for protective coatings for optical devices)

L26 ANSWER 16 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:60768 HCAPLUS
DOCUMENT NUMBER: 118:60768
TITLE: Preparation of unsaturated polyester gelcoat molding compositions
INVENTOR(S): Sakai, Shiro
PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 04164911	A	19920610	JP 1990-291039	199010 29
PRIORITY APPLN. INFO.:			JP 1990-291039	199010 29

AB The title **compns.** contain **photoinitiators**, organic peroxides, and a polyester, which is prepared by reacting a polyester bearing carboxy terminal groups and α , β -unsatd. carboxylic acid ester groups with epoxy **compds.** Thus, heating

neopentyl glycol 208, isophthalic acid 332, hydrogenated bisphenol A 240, fumaric acid 116 g under N at 220°, adding 142 g glycidyl methacrylate, heating and adding 632 g styrene gave a composition, which was irradiated by UV in the presence of 2% Irgacure 181 and 2% Perkadox 16 to give gelcoats with good yellowing prevention in boiling water over ≥500 h.

IT 145566-89-8P

RL: PREP (Preparation)

(preparation of, for gelcoats, discoloration-resistant)

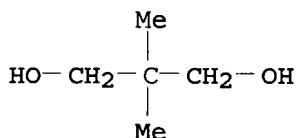
RN 145566-89-8 HCAPLUS

CM 1,3-Benzenedicarboxylic acid, polymer with (2E)-2-butenedioic acid, 2,2-dimethyl-1,3-propanediol, ethenylbenzene, 4,4'-(1-methylethylidene)bis[cyclohexanol] and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 126-30-7

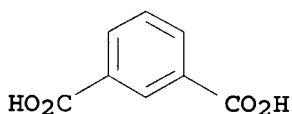
CMF C5 H12 O2



CM 2

CRN 121-91-5

CMF C8 H6 O4

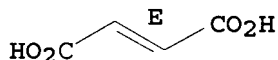


CM 3

CRN 110-17-8

CMF C4 H4 O4

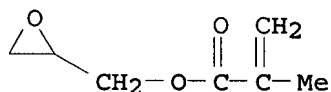
Double bond geometry as shown.



CM 4

CRN 106-91-2

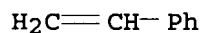
CMF C7 H10 O3



CM 5

CRN 100-42-5

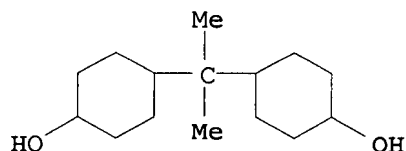
CMF C8 H8



CM 6

CRN 80-04-6

CMF C15 H28 O2



IC ICM C08F299-04

ICS B32B017-12; B32B027-06; C08L067-06

ICA C08G059-14

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 42

IT 145566-89-8P

RL: PREP (Preparation)

(preparation of, for gelcoats, discoloration-resistant)

L26 ANSWER 17 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:218087 HCAPLUS

DOCUMENT NUMBER: 114:218087

TITLE: Composition and method of producing visible light-sensitive layer by electrodeposition

PATENT ASSIGNEE(S): Kansai Paint Co., Ltd., Japan

SOURCE: Ger. Offen., 30 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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DE 3932650	A1	19900405	DE 1989-3932650	198909 29
DE 3932650	C2	19970612		
JP 03179064	A	19910805	JP 1989-232855	198909

JP 2758039	B2	19980525		11
US 5102775	A	19920407	US 1989-413677	
				198909
				28
KR 139051	B1	19980428	KR 1989-14159	
				198909
				30
JP 03137176	A	19910611	JP 1990-120424	
				199005
				10
JP 2911958	B2	19990628		
PRIORITY APPLN. INFO.:			JP 1988-246394	A
				198809
				30
			JP 1989-178041	A
				198907
				12

OTHER SOURCE(S): MARPAT 114:218087

AB The title photosensitive layer comprises: (1) a photohardenable resin containing a photosensitive group, which can crosslink or polymerize on irradiation, and an ionic group; (2) a sensitizer which can react with the above resin on irradiation with light; and (3) a H₂O-insol. polymerization initiator. An imaging method comprises electrodeposition of the above composition on a conductive substrate, image-wise irradiation with light, and development with a developer solution

IT 130757-28-7DP, reaction product with acrylic acid

RL: SPN (Synthetic preparation); PREP

(Preparation)

(preparation and use of, in electrodeposited photosensitive imaging films)

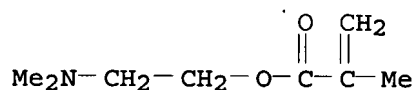
RN 130757-28-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with 2-(dimethylamino)ethyl 2-methyl-2-propenoate, methyl 2-propenoate and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 2867-47-2

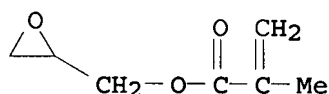
CMF C8 H15 N O2



CM 2

CRN 106-91-2

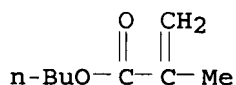
CMF C7 H10 O3



CM 3

CRN 97-88-1

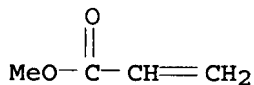
CMF C8 H14 O2



CM 4

CRN 96-33-3

CMF C4 H6 O2



IC ICM G03F007-028

ICS C09D005-44; C08F002-50; C25D003-10

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 90-94-8, Michler's ketone 119-61-9, Benzophenone, uses and miscellaneous 947-19-3, 1-Hydroxycyclohexyl phenyl ketone 1483-73-4, Diphenyliodonium bromide 4419-11-8 32760-80-8 33943-20-3 71868-10-5 77473-08-6, 3,3',4,4'-Tetra-(tert-butylperoxycarbonyl)-benzophenone 82799-44-8 119989-72-9

RL: USES (Uses)

(photopolymn. initiator, electrodeposition composition containing)

IT 26300-51-6DP, Acrylic acid-butyl acrylate-methyl methacrylate copolymer, reaction product with glycidyl methacrylate

130757-28-7DP, reaction product with acrylic acid

RL: SPN (Synthetic preparation); PREP

(Preparation)

(preparation and use of, in electrodeposited photosensitive imaging films)

L26 ANSWER 18 OF 18 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1985:525205 HCAPLUS

DOCUMENT NUMBER: 103:125205

TITLE: Protective transfer coatings

PATENT ASSIGNEE(S): Nitto Electric Industrial Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

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LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60068083	A	19850418	JP 1983-177463	198309 26
PRIORITY APPLN. INFO.:			JP 1983-177463	198309 26

AB Protective coatings with good adhesion to flat surfaces are formed without the use of organic solvents by coating a backing film with an **aqueous composition** containing a **photoinitiator** and a crosslinkable film-forming emulsion (prepared by introducing unsatd. groups into the outer layer of particles obtained by 2-step emulsion polymerization), then pressing the coated side of the film against the surface, photocuring it, and removing the backing film. Thus, a dispersion of Et acrylate 40, Me methacrylate 25, trimethylolpropane triacrylate 5, and Na dodecylbenzenesulfonate (I) 1 part in 100 parts H₂O was heated and treated with (NH₄)₂S₂O₈ to form a copolymer emulsion, to which was added dropwise a mixture of Bu acrylate 20, methacrylic acid 10, I 1, H₂O 53, and (NH₄)₂S₂O₈ 0.05 part and polymerization continued to give an emulsion of 2-layer particles, which was treated with 10 parts glycidyl methacrylate and 0.1 part Me₂NPh and heated to obtain crosslinkable polymer (II) [98112-44-8] particles. Then 1 part benzoin Et ether and 5 parts neopentyl glycol diacrylate were added to form a photocurable composition, which was applied to a 60-μ polyethylene (III) [9002-88-4] film and dried to give a 10-μ coating layer. The coated film was pressed against a 0.1-mm corona discharge-treated polypropylene (IV) [9003-07-0] sheet and exposed to UV light, then the III film was peeled off, leaving a coating which showed good hardness and adhesion, with no warping of the IV sheet. Coatings applied similarly to stainless steel, Cu, and acrylic polymer sheets all showed good adhesion.

IT 98112-71-1P

RL: PREP (Preparation)

(transfer coatings, solventless, photocurable, abrasion-resistant, prepared by two-step emulsion polymerization)

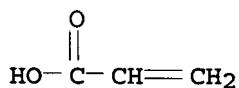
RN 98112-71-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with ethenylbenzene and ethyl 2-propenoate, 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7

CMF C3 H4 O2

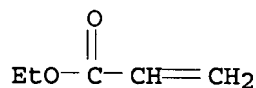


CM 2

CRN 26338-86-3
 CMF (C8 H8 . C7 H10 O3 . C5 H8 O2)x
 CCI PMS

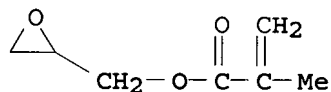
CM 3

CRN 140-88-5
 CMF C5 H8 O2



CM 4

CRN 106-91-2
 CMF C7 H10 O3



CM 5

CRN 100-42-5
 CMF C8 H8



IC ICM B05D001-28
 ICS B05D003-06

ICA C08J007-04

CC 42-11 (Coatings, Inks, and Related Products)

IT 106-91-2DP, reaction products with Bu acrylate-cyclohexyl
 methacrylate-diethylene glycol dimethacrylate-2-ethylhexyl
 methacrylate-N-butoxymethylacrylamide copolymer 98101-04-3DP,
 reaction products with glycidyl methacrylate 98112-44-8P
 98112-71-1P

RL: PREP (Preparation)

(transfer coatings, solventless, photocurable,
 abrasion-resistant, prepared by two-step emulsion polymerization)

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